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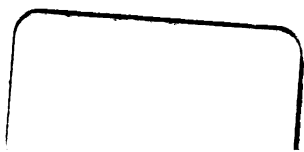
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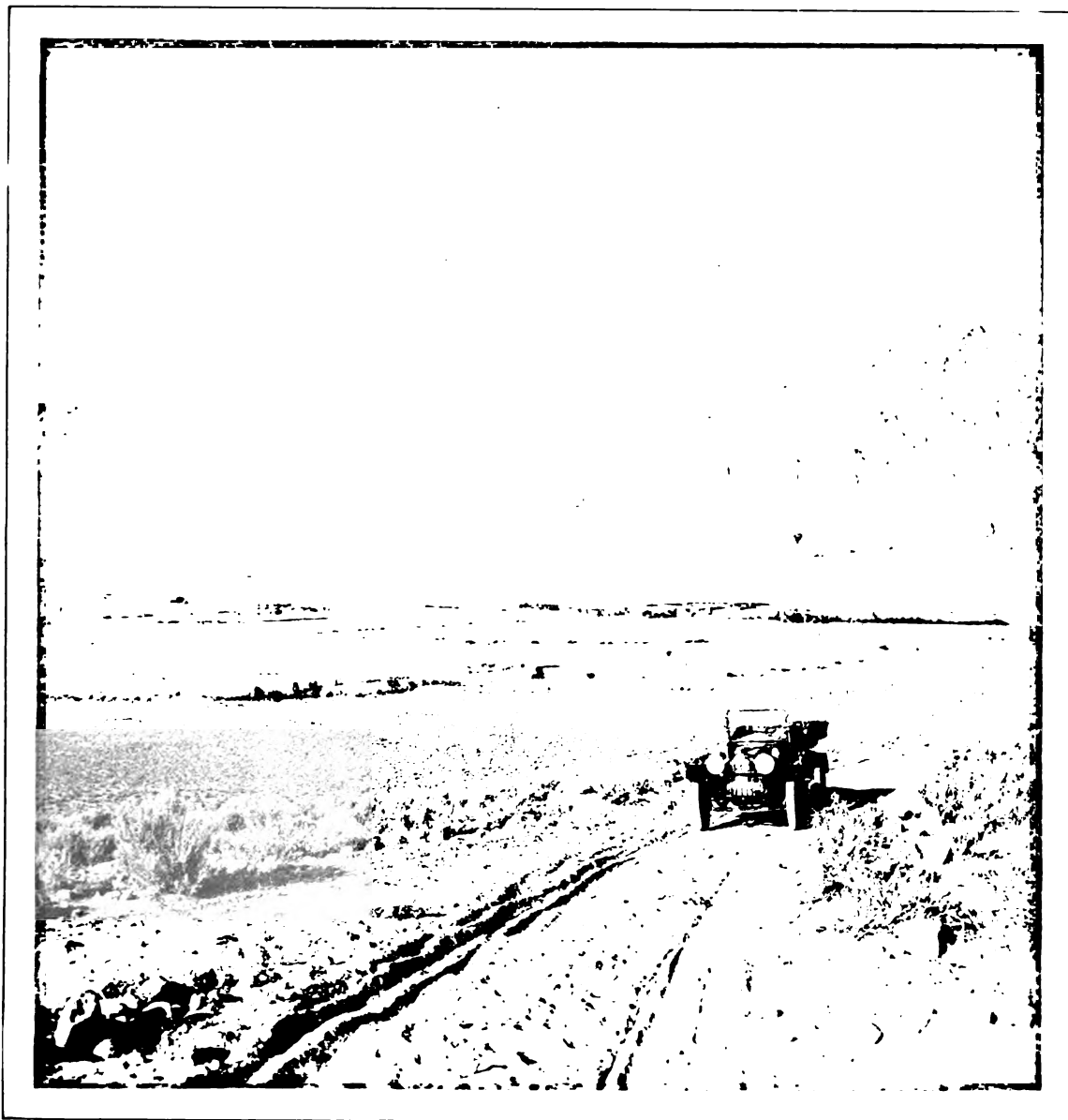
THE MOTORING AUTHORITY OF THE PACIFIC COAST



VOL. XXVIII, No. 1

OCTOBER 15, 1917

\$2.00 A YEAR, 10c A COPY



A GLIMPSE OF ROUND VALLEY, NEAR BISHOP, WITH MIGHTY SIERRAS TOWERING IN THE BACKGROUND.



The Car that Must Get There

—the car that carries staff officers to different parts of the battle line.

Its tires *must* stand up to the hardest kind of hard service,

—*must* have the endurance to give miles without stint and traction without fail.

And that is the kind of tire that the *United States Tire Company is making,*

—the enduring, dependable tires that will stand up under far harder service than you are likely to demand of a tire,

—and that will give the low mileage cost you want.

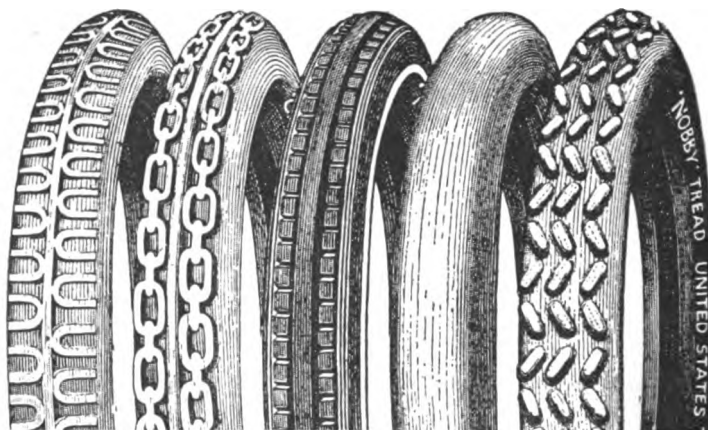
Proof that *United States Tires* are giving this service economy lies in the fact that

—*United States Tires show* a larger percentage of sales increases than the vast percentage of increase in the number of automobiles in use this year over last.

United States Tires Are Good Tires

'Royal Cord' 'Nobby' 'Chain' 'Usco' 'Plain'
Also tires for Motor Trucks, Motorcycles, Bicycles,
and Aeroplanes

*United States Tubes and Tire Accessories
Have All the Sterling Worth and Wear
that Make United States Tires Supreme.*



Mention "Motor West," Please, When Writing to the Advertiser

Studebaker

The demand for Commercial Cars is constantly increasing

Studebaker dealers in addition to an attractive line of passenger cars, also have a complete, distinctive line of high grade $\frac{1}{2}$ ton and 1 ton Commercial Cars to sell.

This insures the Studebaker dealer a steady, profitable business all the year 'round.

If there is no Studebaker dealer in your territory, write today for detailed information.

STUDEBAKER

Detroit, Mich.

South Bend, Ind.

Walkerville, Ont.

Address all correspondence to South Bend

It pays to be a *Studebaker* dealer



Cadillac

Regarding the Economical Operation of the Cadillac Eight

The owners are best qualified to speak on this subject and we herewith print a few expressions from men who own and know the Cadillac:

P. A. NEWMARK—"I traveled 20,000 miles on the original set of tires."

A. B. WEIL—"I do not know what trouble with a motor car is like."

W. H. HAY—"I ran 9000 miles without repair of any kind."

LILLIAN E. MCKINLEY—"I wish to especially express my appreciation of the excellent service given by your firm."

T. E. SULLIVAN—"Have not spent a cent on it yet."

GILBERT CAMPBELL—"I expected good service from my new Cadillac, as my other Cadillac ran 23,000 miles at a total cost of \$5 for repairs."

E. D. ROBERTS—"The only attention given my car by your mechanical force was an inspection at the end of 25,000 miles."

WESTERN AUTO STAGE CO.—"We find Cadillac Eights operate forty per cent cheaper than any other high-grade car."

R. A. BROOMFIELD—"The Cadillac Eight is easier on tires than any of the previous cars I have owned."

E. RICHARD JUST—"Sixteen thousand miles and not a sign of trouble. Two of the original tires."

R. MORRISON—"I average over 12 miles to the gallon, and drive my car hard."

H. J. PARMELEE, Santa Barbara—"Twenty thousand miles and less than \$10 for repairs."

S. J. FISSELLI, Fresno—"Have run 25,000 miles and repair bills too little to mention."

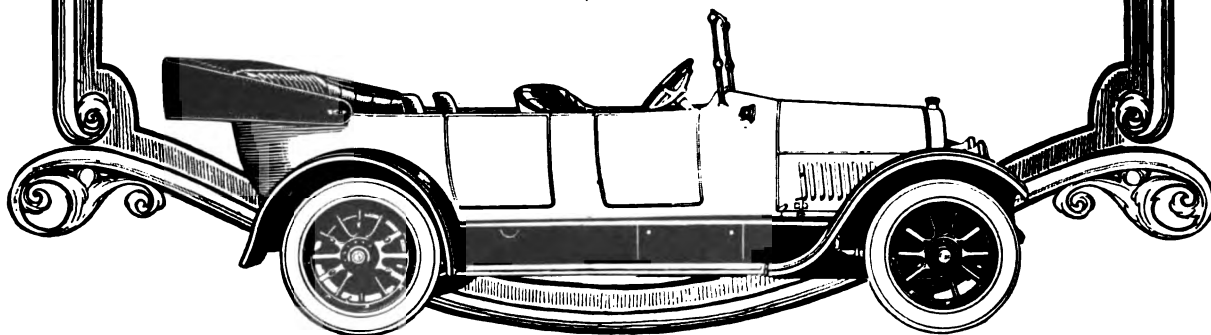
RALPH SPARKS, Winters—"Sixteen thousand miles to date and not one cent for repairs."

DR. FRED J. DAVIS, Westwood—"To my surprise tires run twice as far on my Cadillac Eight as on any other cars I have owned."

DON LEE

Twelfth and Main Streets

LOS ANGELES, SAN FRANCISCO, FRESNO, OAKLAND, SACRAMENTO;
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No matter how dull or dead your car looks we will restore the original luster. Leave your car with us a few hours and take it away **NEW**. The cost is *small*.

The Finishing is *lasting*—no oil, no wax, no grease, no acid.

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Com-Sen Co. is the Commonsense way



Comfort and Convenience Economy and Durability Beauty and Quality

The features that dominate the best cars are conspicuous in the Empire.

**Fours and Sixes
\$1125 to \$1345
F. O. B. Indianapolis**

The splendid reputation of Empire motor cars, zealously guarded and protected, is your guarantee of satisfaction.

Some splendid territory is open to good dealers. Write for literature and particulars of our liberal sales agreement.

EMPIRE AUTOMOBILE CO.
INDIANAPOLIS, INDIANA
ESTABLISHED, 1908



See!—These Bearings Keep the Worm and Wheel in Proper Mesh!

Notice the double-row of balls and the inner race deflected? These features of S K F Ball Bearings give a practically uninterrupted support and keep the worm and wheel in proper mesh, and yet at the same time allow for deflection produced by constant shocks and unevenness of the road or strains from the universal joint.

S K F Ball Bearings are rugged and uniformly reliable, particularly on worm drives, which are subject to heavy strains. This is why many of the better grades of Trucks are S K F equipped.

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HARTFORD CONN.

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of California, Inc.
San Francisco

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Toronto, Ontario
Canada



Worm Drive of a Hewitt-Ludlow Truck showing the S K F self-contained double thrust and radial ball bearings.

MOTOR West

THE MOTORING AUTHORITY OF THE PACIFIC COAST

VOL. XXVIII., No. 1

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ANTI-GLARE LENS LEGAL IN CALIF.

**Court Decides in Favor of Defendant
in Case Where Representative of Mc-
Kee Lens—Decision a Precedent.**

The use in automobile head-lights of anti-glare lenses which concentrate the light rays and divert them downward to such a degree that they do not project beyond the distance allowed by the state head-light law, does not make them in any particular conflict with the California state law. This is the decision recently given by Judge George S. Richardson, of the police court of Los Angeles, in the case of the people of California vs. Ralph G. Whitlock. The head-lights on Whitlock's car were equipped with McKee lenses, giving a light which in the case of each lamp did not exceed 36 candle-power. Behind the electric bulbs were the usual type of parabolic mirrors used in motor car head-lights, and in front of the bulbs were the McKee lenses, of concave-convex shape. The lower two-thirds of the front part of the lens were moulded in a series of horizontal prisms piled on top of the other, the upper third was moulded in a series of vertical prisms. The horizontal prisms concentrated and turned downward the light rays thrown out by the parabolic reflector. The upper vertical prisms dispersed sideways the light striking them, projecting it in a diffused glow. Thus the beams of light pointed horizontally and not more than 75 feet from the car and not more than 42 inches above the street level, thus complying with the specific requirements of the California state head-light law. The horizontal prisms, in accordance with the well-known principle of optics, refracted downward the purple, blue and violet rays, the ones most blinding and harmful to the eyes, the result being a strong, mellow beam of light. The case against Whitlock was, there-

fore, dismissed. Judge Richardson's decision is considered a case in point of the favorable attitude taken by the police and state authorities toward the use of glare-eliminating devices in automobile head-lights.

Houk, of Wire Wheel Fame, Dies.

George W. Houk, multi-millionaire manufacturer of automobile wire wheels, died in his Hollywood, Cal., home last week at the age of 51 years. His death was the end of six weeks' suffering from a paralytic stroke. Houk came to Southern California from Buffalo, N. Y., a few months ago, and took close interest in his new ranch holdings near Escondido, Cal. He rose to wealth from a small beginning, employing only a few men, but his business and energies expanded with the same rapidity as the automobile-industry in general and within a few years he was owner of huge factories and president of the great Houk Mfg. Co., large manufacturer of wire wheels for automobiles, which was taken over recently by the Wire Wheel Corp. of America.

Ajax Opens Direct Coast Branches.

The Ajax-Grieb Rubber Co., New York, recently opened direct factory branches in Los Angeles, San Francisco, Portland and Seattle, while Hughson & Merton, hitherto acting as Coast distributors, relinquished the agency for Ajax tires. W. P. H. Reilly, who arrived in California several months ago, will act as Pacific Coast sales manager for the Ajax, with headquarters in San Francisco. The other new Coast branches will be in charge of service supervisors, who will direct twice the total number of salesmen formerly employed.

Automobile Show at Oregon Fair.

Fifty-five cars were displayed at the automobile show forming part of the Oregon state fair, held at Salem, Ore., recently. The truck exhibits were housed in a special tent.

GARAGEMEN FIGHT CHAUFFEUR BONUS

**Vigorous Campaign Opened in San
Francisco Against Practice of Giving
Discounts on Automobile Supplies.**

Garage owners and repair men in San Francisco have opened a vigorous campaign against the allowance of discounts to chauffeurs on automobile supplies, demanding that the section of the state motor vehicle law prohibiting this practice be enforced. The section strictly forbids persons in charge of motor vehicles from accepting, either directly or indirectly, a bonus, discount or other consideration for supplies or parts furnished or purchased or on any work done on the car by other persons, and no person furnishing supplies or parts, work or labor shall give or offer any chauffeur any bonus of any kind. Violation of these restrictions constitutes a misdemeanor. Through their local organization, the Garage Owners' Protective Association, a branch of the San Francisco Automobile Trade Association, the garage men will endeavor to have violators of this section of the law convicted. They claim that many chauffeurs are demanding bonuses in buying supplies or having work done, and if refused, giving their business to repair and supply men outside the organization who are willing to ignore the law. The association declares that its campaign will also be directed against dealers and repair firms who are now paying bonuses to drivers. The penalty for violation of the section is a fine of \$100, or thirty days in jail, or both for the first offense.

Dayton Tire Branch in San Francisco.

The Dayton Rubber Mfg. Co., Dayton, O., will open a branch in San Francisco within a few weeks, according to R. L. Devoe, general sales manager of the company.

COURT DECIDES IN FAVOR OF FORD

Upholds Company's Right to Control Sale of Cars at Price Fixed by It—Others Cannot Use Name.

Exclusive right to the use and control of the name Ford in the manufacture and sale of automobiles has been sustained in the decision of the United States circuit court of appeals for the ninth circuit at San Francisco in the case of the Ford Motor Co. vs. Benjamin E. Boone, et al. Incidentally, the court decided that the unauthorized use of the name was unlawful. Further, the opinion fully sustains the validity of the agency contract of the Ford Motor Co. and its right to control the sale of its cars in a restricted territory at a price fixed by it.

Selden Sales Head on Way to Coast.

H. T. Boulden, sales director of the Selden Truck Sales Co., Rochester, N. Y., has left the factory for an extensive trip to the Pacific Coast for the purpose of appointing new Selden agencies in the territory. The Selden company recently received word that the Selden Motor Vehicle Co. is to build the first of the new government motor trucks for military service, according to the decision of the motor truck section of the quartermaster's general office at Washington. Two classes of military truck will be built for the government—class A, of from 1½ to 2-ton carrying capacity; and class B, of from 3 to 5-ton carrying capacity. The latter type is the more important, requiring special detail work, and the Selden factory was aided in securing the government contract by reason of its past experience in building motor trucks for foreign use.

Maxwell Agency in Salt Lake City.

The Sun Motor Sales Co., Salt Lake City, Utah, has been appointed distributor for Maxwell cars and trucks in Utah, Wyoming and southern Idaho. The last named section of the company's territory will be handled from its Pocatello, Ida., branch. More than 30 dealer agencies will be appointed by the company to cover the three states.

Racine Tire in Oakland.

The Power Rubber Co., San Francisco, Cal., Racine tire distributor for Northern California, has opened a branch on upper Broadway, Oakland, with Thomas P. Costello, branch manager, and John F. Mullen, sales manager.

To Build Trucks in Salt Lake.

The Wilson Motor Co., Salt Lake City, Utah, capitalized at \$300,000, has been formed to manufacture trucks. The company results from the combination of the Wilson Brothers' Garage & Machine Works and the Aero Water Supply Co., both of Paxico, Kan., and both financed by Utah capitalists. George S. Wilson is president of the new company, J. P. Sprunt, vice-president; and Walter Daniels, secretary. The plants will be moved from Paxico to Salt Lake City. In addition to trucks, the company expects to manufacture cars, trailers, tractors, farm engines and water supply systems.

Bearings Service to Open 450 Agencies

The Bearing Service Co., represented upon the Pacific Coast by D. B. Bevier, supervisor, is steadily working to perfect the service which it affords through its 22 branches located in the principal cities of the country. Approximately 450 sub-agencies, in close contact with the main branches, will be established by the company.

Manager Scripps-Booth in Spokane.

George R. Beverley has been promoted to manager of the Scripps-Booth Distributing Co., Spokane, Wash., Scripps-Booth and Moon car and Lippard-Stewart truck dealers.

Jordan Sales Head Visits Coast.

W. B. Riley, general sales manager of the Jordan Motor Car Co., Cleveland, was recently the guest of George R. Bentel, Los Angeles, Cal., Jordan dealer, upon his visit to the Pacific Coast in the course of an inspection tour through the West.

Jordan Added to Mercer in Salt Lake.

The Mercer Sales Co., Salt Lake City, Utah, Mercer agency, has added the Jordan car line, and has changed its name accordingly to the Mercer & Jordan Sales Co.

Ginn With Western Motors.

G. C. Ginn, former superintendent of service with Don Lee, San Francisco, has taken a similar position with the Western Motors Co., Oakland, Cal., recently appointed Maxwell car dealers.

Brewer Takes Cole in Spokane.

The Brewer Motor Car Co., Spokane, Wash., has taken the Cole car agency for eastern Washington and the pan-handle section of Idaho.

Burman Takes Oldsmobile in Oakland

Charles Burman has taken the agency for Oldsmobile cars in Oakland, Cal., and the territory east of San Francisco Bay.

So. Cal. Buys 2,149 Cars in Month.

Southern California bought 1,964 motor cars and 185 motor trucks during the month of September. These figures show an increase of 457 cars and 106 trucks over those of the same month a year ago. Previous to Sept. 1, the ten Southern counties of the state absorbed 18,786 cars and 1,472 trucks. The total for the first nine months of the year, which embraces September sales, show registrations of 20,750 new cars and 1,657 new trucks, a total of 22,407 motor vehicles.

Add Dort Agency in Tacoma.

The American Automobile Co., Tacoma, Wash., Reo and Stearns car dealers, have added the agency for the Dort car.

Change Name, Great Western Motors.

The Paige Motor Sales Co., Seattle, Wash., has changed its name to Great Western Motors, Inc., and has increased the capital stock to \$25,000.

Ashley is King Dealer for Oregon.

Fred S. Ashley, Portland, Ore., has been appointed King car distributor for the state of Oregon.

New Willard Agency in Seattle.

The Willard Storage Battery Co., Seattle, Wash., has succeeded the Auto Electric Equipment Co., and has opened quarters at 1524 Eleventh Ave. with C. H. Starr as manager.

Paul G. Hoffman to American Lake.

Paul G. Hoffman, retired general manager of the Studebaker Corp. of California, has joined the army training camp at American Lake, Wash.

Arnold to Open Down-Town Quarters.

Harold L. Arnold, Los Angeles, Hudson and Dodge car dealer, will open his new downtown salesroom at W. Seventh St. and Grand Ave. probably before Nov. 1. The dimensions of the new structure are 100x105 feet, with two stories, a mezzanine floor for offices, and a basement.

D. F. Poyer in New Building.

The D. F. Poyer Truck Co., Los Angeles, Republic truck distributor, has occupied its new building at 1021-23 S. Grand Ave. The building fronts on the street for 70 feet and is 155 feet deep. Offices are on a mezzanine floor. The main part of the building is taken up by the repair department, storage and stock rooms.

L. A. White Changes Name.

The Pioneer Commercial Auto Co., White car and truck dealer in Los Angeles, has changed its name to the White Auto Co.



Leach Guarantees King for Year.

So successful has the Leach Motor Car Co., King distributors in Southern California, been with the eight-cylinder product of that company that they have publicly announced a year's guarantee with each King sold. The usual guarantee on a motor car is for a period of 90 days, but the Leach Motor Car Co., recently made the following announcement: "The King 8 has reached such a degree of mechanical perfection that we now feel justified in backing this car with a full year's guarantee. This is the best and strongest evidence we can possibly submit of our confidence in its performance."

Takes Dearborn Truck Unit Agency.

The California Automobile Co., San Francisco, has taken the agency for the Dearborn one- and two-ton truck units for Ford cars.

Hudson Service Head Visits Coast.

W. S. Ramsay, service manager for the Hudson Motor Car Co., Detroit, Mich., recently visited San Francisco on a tour of the United States. He was formerly resident engineer for the Hudson on the Pacific Coast.

New Franklin Cars on Coast.

Models of the new series 9 Franklin car arrived at the principal sales agencies for the car on the Pacific Coast recently. The new cars show no radical changes, either mechanically or in body design.

To Manage Burman Agency Sales.

John Fremming will act as sales manager for Charles H. Burman, Oldsmobile dealer in Oakland, Cal.

Fageol Dealers for No. California.

The Butler-Veitch Co., Berkeley, Cal., has taken the agency for Fageol trucks for the Northern California territory.

Chalmers Dealer in Oakland Vicinity.

Frank Bartels, Oakland, Cal., has taken over the distribution of Chalmers cars in Alameda and Contra Costa counties.

J. A. Marsh Dies.

J. A. Marsh, prominent in the successful agitation for favorable automobile legislation in California, first and only president of the San Francisco Motor Car Dealers' Association and director in the California State Automobile Association, died recently in San Francisco.

Paige and Saxon Dealer in Tacoma.

I. B. Schabel, Tacoma, Wash., has taken the agencies for Paige and Saxon cars.

Denver to Emulate S. F. Show.

The Denver, Colo., automobile show, Nov. 12-18, will be held under the auspices of the Denver civic association, automobile trades division, with G. A. Wahlgreen as general director. The San Francisco show, which was considered by all who saw it the most beautifully decorated and artistically arranged automobile show ever held, will be reproduced as closely as possible. Forty-five motor car dealers and fifty accessory dealers will exhibit and the total number of cars on display will be about 120, occupying a total space of 20,000 square feet.

Elgin and Harroun in Tacoma Vicinity.

E. R. Smith and E. S. Thayer, Tacoma, Wash., have taken the agencies for Elgin and Harroun cars in Pierce county. The company, known as the Elgin Sales Co., has opened quarters at 422-26 St. Helens Ave.

Heads Chevrolet Sales in Texas.

B. J. MacMullen has been appointed district sales manager for the Chalmers Motor Co., Detroit, Mich., with headquarters at Fort Worth, Tex. MacMullen was for some time district manager for the Chevrolet upon the Pacific Coast.

Waltham Speedometer Agents in Cal.

The Electric Equipment Co., Los Angeles, Cal., has secured the agency for the Waltham speedometer in California.

Large Century Tire Orders on Coast.

The Century-Plainfield Tire Co., San Francisco, Cal., recently received an order for a full car load of Century tires, for which the company is Coast branch distributor, from the R. M. Wade Co., Portland, Ore. Shortly after, another car load was contracted for by the Pacific Hardware & Steel Co., San Francisco distributor for Century tires, in addition to the regular shipment of one car load of tires a week.

Mission Bell on 1918 Cal. Licenses.

A bronze mission bell will be the state seal upon the California motor vehicle license plates for 1918, supplanting the golden poppy used on the license plates during 1917. H. A. French, superintendent of the state motor vehicle license department, has announced that an order has been placed for approximately 1,000,000 of the mission bell seals.

Stevens Adds Haynes Agency.

A. C. Stevens, Portland, Ore., Winston and Elgin car dealer, has added the agency for the Haynes car.

**HALL-SCOTT FILLS
BIG PLANE ORDER****After Long Test Oakland Firm Supplies 300 Motors to Russian Government for Use on Eastern Front.**

The Hall-Scott Motors Co., Oakland, Cal., recently made its last special shipment of three hundred airplane engines manufactured for the Russian government for use on the eastern battle front in the present European war. The engines are the Hall-Scott A5, six-cylinder models for airplane service. Two Russian government inspectors and four assistants remained at the Hall-Scott factory and made sure that every part and detail was carried out according to the specifications. Every engine was put through severe tests before being accepted. Each one was run ten hours without a stop, then was entirely disassembled and every part subjected to a careful examination. Then, reassembled, the engine was run for six hours and after that again dissected. Reassembled once more it was run for one hour and again examined. Having survived all these ordeals it was finally accepted by the Russian inspectors.

Pearson Over Maxwell Retail.

George Pearson, Jr., formerly connected with the Maxwell Motor Co. branch on the Pacific Coast, has been appointed supervisor of retail sales for the company. He will handle trucks particularly.

Made Western Mgr. for Cassidy.

A. L. Martin has been appointed Western manager for the Edward A. Cassidy Co., with headquarters in San Francisco, Cal. He was formerly sales and accessory manager for the Western and General Tire & Rubber companies.

Bradt, of A. B. C. Starter, Dies.

Walter J. Bradt, traveling sales manager of the A. B. C. Starter Co., Detroit, died recently of ptomaine poisoning in Portland, Ore.

Elgin Car in Hawaiian Islands.

Frank Coombs, of Honolulu, has secured the agency for the Elgin car and is making preparations to push the sale of these cars in the Hawaiian Islands.

Faulkner Orders \$1,000,000 Marmons.

Marmon cars to the extent of \$1,000,000 worth have been contracted for by Al. G. Faulkner, Marmon distributor in Southern California.

OREGON MOTORISTS DENY MERGER TALE

President Watkins, of State Motor Association, Says Report of Its Absorption by A. C. of A. is False.

Officials of the Oregon State Motor Association are aroused over reports which have reached them from the officials of the Automobile Club of Seattle and the Tacoma Automobile Club relative to the activities of W. M. Melvin, who it is alleged announced upon his arrival in Portland a few weeks ago that he was acting as organizer of the Auto Club of America and that he came from the club's headquarters in Los Angeles.

According to the advices received by Frank E. Watkins, president of the Oregon State Motor Association, it is alleged that Mr. Melvin has represented in Seattle and Tacoma that the Auto Club of America has absorbed the Oregon State Motor Association, as well as one or two of the leading automobile organizations of California; that the active secretary of the Oregon association has been relieved; that his organization is about to build a \$60,000 clubhouse in Portland, and that the Oregon State Motor Association is about to die a natural death.

Mr. Melvin, it is further alleged, has also said that Frank E. Watkins is a brother of D. E. Watkins, secretary of the California Automobile Association, and that the absorption of the Oregon association was accomplished through the relationship.

In a formal statement given to the Portland press last week, together with copies of letters he had received from Tacoma and Seattle, Frank E. Watkins alleges that all of the representations stated above are false and that he bears no relationship to Mr. Watkins, of San Francisco.

Pearl Takes Truxton Unit.

The Pearl Motor Car Co., Los Angeles, has taken the agency for the Truxton unit for Ford cars in Southern California, according to the announcement of J. B. Clark, factory representative on the Coast.

Fisher Inv. Co. to Finance Car Sales.

The Fisher Investment Co., Tacoma, Wash., has been incorporated to finance the sale of motor cars as its chief business. F. Garrett Fisher, president of the Tacoma Speedway Association, and Walter H. C. Griffith, of the Griffith Motor Co., are trustees.

Donates Kissel for Camouflage.

W. L. Hughson, of KisselKar fame upon the Pacific Coast, has donated the famous Kissel military scout car recently used to blaze the "three nation run" to the government department having the new operations of "camouflage" in its charge. A committee of three prominent San Francisco artists will paint this car with color patches, which suggests nothing except the surrounding earth, trees, grain fields, sky, etc., making an exact fac-simile of the cars now being used by the allies along the various war fronts.

To Head Portland Mitchell Sales.

A. L. Smith has succeeded H. S. Rodebaugh as sales manager of the Mitchell, Lewis & Staver Co., Portland, Ore., Mitchell dealers. Smith formerly traveled for the Mitchell car in California, later representing it in Oregon and Washington. Rodebaugh will sell Mitchell cars in Denver, Colo.

Labor Conditions Improved in Seattle.

Motor car dealers in Seattle, Wash., will hereafter close their establishments, both sales and service departments, promptly each week day at 6 p.m., and all day Sundays and holidays, according to the announcement of the Motor Car Dealers' Association of Seattle. The association also has requested that all motor car and truck users co-operate with them in the movement to create better working conditions for their employees.

Erlin Represents Scripps-Booth.

George Erlin, former sales manager of the Reliance Automobile Co., San Francisco, has resigned to become Western factory representative of the Scripps-Booth Corp., Detroit, Mich.

Schuler Co. in New Quarters.

The Eugene Schuler Co., San Francisco, has located in new quarters at 1235-37 Van Ness Ave., to distribute the Pilot car in the Northern California territory. H. H. Stanley is manager of the new branch.

New Hal Agency in Oregon.

The Western Motor Car Sales Co., Portland, Ore., has been appointed distributor of Hal twelve-cylinder cars throughout the state of Oregon and the five adjacent Washington counties bordering on the Columbia River.

Large Republic Registration.

More Republic trucks were licensed in California during August than any other make of commercial vehicle, according to the claim of Republic dealers, who sold about 75 during the month.

ECONOMY DRIVER TELLS OF METHODS

Portland Expert Explains How Greatest Possible Mileage May Be Obtained by Observing Certain Rules.

D. E. Larkin, of Portland, Ore., who made more than 46 miles on one gallon in the recent Maxwell Liberty Bond contest, makes some suggestions about economy which are decidedly timely in these days of threatened gasoline shortage. In order to get the greatest gasoline efficiency from a car, he says it is important to keep the motor in perfect working order. Clean oil is necessary. The carburetor must be adjusted so as thin a mixture as possible is obtained. The bearings should be kept clean, free and properly lubricated. Another important feature is the oiling of all parts of the springs, as 20 per cent greater efficiency may be had if it is done. Tires are to be filled to full capacity, about 65 pounds pressure being required. The windshield should be tilted back so as to offer as little resistance as possible to the wind. Brakes are not to be allowed to drag. It is best to maintain a speed of about 20 miles an hour, or thereabouts. The driver in keeping the feed pressure even and steady assures greater economy, as fluctuation uses up more gasoline than a steady flow. Coasting is legitimate and is highly important in the saving of fuel. Where the grade is long it is best to shut the engine entirely off. If the grade is short, better results are had if the engine is kept barely turning over. The gasoline consumption is not as great by this as it is in starting the engine. Evening is the best time to take long drives, as the gasoline lasts longer than during the day time hours.

Farmers Have Money; Will Buy Cars

"Crops are good and business is booming," is the report of W. D. Albright, Northwest manager of the B. F. Goodrich Rubber Co., who returned recently from a three weeks' trip through parts of Idaho, Montana and Washington. "While crops are not as large this year as they were last year, yet the farmers are getting such high prices for their produce that they will all make big money and a considerable portion of it will find its way into motor vehicles of all descriptions."

Bacon Over Renstrom Advertising.

George V. Bacon has been appointed advertising manager of the F. O. Renstrom Co., San Francisco, Cal.

How Yosemite Has Been Helped by the Motor Car

Since the time when the thawing winter snows loosened their grip on the higher Sierras up to the end of the month of August, a total of 4,735 private motor cars, carrying 16,600 passengers, have entered Yosemite Valley in California, according to official government figures recently issued. September figures, not yet made public, will undoubtedly bring the number of visiting cars over the 5,000 mark. The number of cars so far counted represent 112 different makes of automobiles. There were about 11,000 or 12,000 campers arriving in their own machines and 1,629 of them stopped at Camp Curry. The total volume of visitors this season is estimated at 30,000 persons.

The peak of the incoming automobile travel was reached in July. During March one car successfully braved the snows and entered the Valley, again only one car in April, 173 cars in May, 1,288 cars in June, 1,966 cars in July, and 1,336 in August.

Comparison of the number of cars of the different makes which visited the Valley show that Fords justify a foregone conclusion by numbering 1,024 out of the total 4,735 cars. Buick cars ranked next, totaling 469. Dodge cars numbered 350; Overlands, 314; Studebakers, 311; Cadillacs, 278; Hudsons, 175; Maxwells, 121; and so on down the list to Pope-Hartfords, 12.

Yosemite has now unquestionably become the mecca of the great automobile tourist travel within the state that seeks the mountains each year as a refuge from the summer heat. With the completion of the new state highway between Mariposa and the Park border, in the next two years travel will be doubled, if not quadrupled. With the high grades to be surmounted cut down to 2,000 feet and a roadbed that nowhere exceeds 6 per cent grade, motoring into the valley will demand no special skill or courage not needed in ordinary lowland travel. Already more than half of the Valley visitors come in their own cars, independent of railroads and stage lines.

Mill Creek Road Breaks Traffic Records

The Mill Creek Canyon road broke all its previous records for automobile travel during the past summer, according to the report issued by the chief traffic officer of San Bernardino county. During June, July, August and September, a total of 11,572 vehicles passed the Santa Ana control, carrying 47,073 passengers. Of the total number of vehicles, 10,397 were automobiles and 1,200 trucks. July was the record month, with 3,163 automobiles traveling the Mill Creek route.

Cooper Wins at Fresno

Earl Cooper and the Stutz won the 25-mile match race between him and A. H. Patterson's Hudson at Fresno, Cal., Sept. 30. His time was 21 minutes, 33 seconds. Drake in a Drake Special won the first event on the day's program, a 10-mile race. The final event was made up of two 5-mile and one 10-mile heat, of which Patterson won the first and third and Cooper the second. Death and casualties marked the 25-mile free-for-all event when W. S. Campbell was killed by his car crashing into the fence. A few seconds later William Bolden struck the car of Clyde Roads and the result was more or less serious, but not fatal, injuries to fifteen spectators.

Can Now See Rainier Park's Wonders in Comfort

For the first time in its history, Mount Rainier National Park in the State of Washington offers adequate accommodations and service to its visitors. The new Paradise Inn and the New Paradise Camp, both in beautiful Paradise Valley and within a short walk of the Nisqually Glacier, will, between them, provide comfortable living facilities for people of widely varied incomes. The luxurious may find a handsome room and private bath at the Inn at customary charges; while a tent with double bed and necessary furniture may be had at the camp for 50 cents a day.

Paradise Inn is located in full view of the great ice-clad monster mountain, upon a broad valley floor elaborately carpeted with wild flowers, from which a short walk will carry the visitor upon the glistening glacier itself. A hundred bungalow tents, each well heated and lighted by electricity, are grouped near by to supplement the sleeping service of the Inn.

Accommodations may also be had, as heretofore, at the Longmire Springs Hotel, the National Park Inn, and the Indian Henry Camp.

The way in also will be easier. The National Park Service will spend \$30,000 improving the automobile road to Paradise Inn. The Starbo Road will also be greatly improved, and much work will be done on the trails.

Seiberling in Thrilling Desert Predicament

Stranded on a desolate stretch of the great Salton desert near Granite mountain in northern Utah and compelled to toil for half a day under the heat to extricate their big touring car, F. A. Seiberling, president of the Goodyear Tire & Rubber Co. and director of the Lincoln Highway, reports one of the most thrilling motor experiences of a life time. In company with three other Lincoln Highway officials, Seiberling toured out to the desert regions west of the great Salt Lake to inspect a strip of proposed highway. The temperature at night dropped to 40 degrees, but climbed to 120 degrees by noon the next day. Both the touring car and the camp car became mired and one of the men started on a twelve-mile hike across the desert to the nearest ranch. The car was extricated after a six-hour struggle and the ranch was reached just as the relief party was starting. The party beheld wonderful phenomena in the desert. Mirages showed clear, cool lakes, running streams, islands covered with shady forests, and moving figures approaching, where there are only groups of desolate sage brush.

Tropico Thwarted on Inter-City Jitney Tax

Right to levy a separate tax upon automobile bus lines operating within its town limits while carrying passengers from one large city to another, but not doing business in the town, has been denied to Tropico, Cal., by the California Court of Appeals. The city, a suburb of Los Angeles, lies on the route taken by bus lines carrying passengers between Los Angeles and Bakersfield. It passed a law requiring all automobiles operating on its streets as a business to pay a separate license fee, and the town authorities tried to enforce it. In deciding against the law, the higher court pointed out that under the ordinance any person who was compelled by business to enter the town might be held up for a permit to use the roads.

Preparing for L. A. Show

All Available Space Disposed of—106 Exhibitors Already Listed—Largest Show West of St. Louis

PREPARATIONS for the annual automobile show of the Los Angeles Motor Car Dealers' Association are being pushed with feverish activity. As it will be impossible for the management to take over the huge Billy Sunday Tabernacle until the celebrated revivalist shall have finished his campaign against sin and the devil, everything is being prepared beforehand to permit of a night-and-day drive of a horde of workmen, who will have but one short week in which to transform the Tabernacle and its canvas-covered adjuncts into a show place in keeping with the exhibits.

With the opening day four weeks away, every inch of space has already been disposed of, despite the fact that the area at the disposal of the committee is more than 30,000 square feet in excess of that available last year. Space for the pleasure cars and the trucks has not yet been assigned, the distribution being scheduled for October 26th, at the Los Angeles Athletic Club. The accessory booths, which will be located around the four sides of the Tabernacle, have all been disposed of, and late comers will have to be content with any odd corners that may be available after the exhibitors have settled down for the week's show.

After a count of noses the management is prepared to announce that the show will exceed in magnitude any similar exhibition ever held west of St. Louis, there being upwards of 100 exhibitors already on the list, including 45 firms who will show more than 60 different makes of passenger cars, 20 companies exhibiting commercial vehicles and 41 concerns displaying accessories of various kinds.

Following is an unofficial list of the exhibitors to date:

PASSENGER CARS.

Oldsmobile	Oldsmobile Co. of Cal.
Cole	Irving Motor Car Co.
Lexington	Wisdom & Co.
Cadillac	Don Lee
Premier, King, Dort, Liberty	Leach Motor Car Co.
Detroit, Ross, Woods Elec.	Turner-Whitford Co.
Stearns-Knight	Lynn C. Buxton
Saxon	J. V. Baldwin Motor Co.
Auburn	W. J. Burt Motor Car Co.
Chevrolet	J. W. Leavitt & Co.
Pathfinder, Davis	Geo. I. Lufkin Co.
Stutz	Walter M. Brown Co.
Winton	Winton Motor Car Co.
Nash	Troy Motor Sales Co.
Empire	Empire Motor Sales Co.
Maxwell, Velie	Lord Motor Car Co.
Roamer	Motor Distrib. Co. of Cal.
Buick	Howard Automobile Co.
Apperson	Apperson Motor Car Co.
Marmon	Al. G. Faulkner
Pierce-Arrow	W. E. Bush
Oakland, National	H. C. McVey Co.
Franklin, Scripps-Booth	Ralph Hamlin
Locomobile	Locomobile Co. of Cal.
Moon	Reilly Motor Car Co.
McFarlan	McFarlan Pacific Co.
Paige, Peerless	Smith Bros.
Willys-Overland	Willys-Overland Co. of Cal.
Chandler	Earl V. Armstrong Co., Inc.
Detroit Electric	Anderson Elec. Car Co.
Inter-State	Wright Motor Car Co.
Hupmobile, Chalmers	Greer-Robbins Co.
Monroe	Conwell-Hathaway Co.

Studebaker	Studebaker Corp. of Am.
Haynes	Speers Motor Co.
Hudson, Dodge	Harold L. Arnold
White	Pioneer Com'l Auto Co.
KisselKar	Pacific KisselKar Branch
Stanley Steamer	Scott & Hadley
Glide	C. S. Anthony
Westcott	I. H. Stratton Co.
Owen Magnetic	Owen Magnetic Sales Corp. of L. A.
Daniels 8	Phelps Distributing Co., San Francisco
Pilot, HAL	Pearl Motor Car Co.
Mercer, Jordan	Geo. R. Bentel Co.

COMMERCIAL VEHICLES.

Studebaker	Studebaker Corp. of Am.
Maxwell	Lord Motor Car Co.
Pierce-Arrow	W. E. Bush
Mack, Saurer	Intern'l Mack Corp.
Republic	D. F. Poyer Truck Co.
Moreland	Moreland Motor Truck Co.
Woodward Truck Attach.	Woodward Truck Attachment Co.
Denby	H. G. Pendell Co.
Autocar	Autocar Sales & Service Co.
Chevrolet	J. W. Leavitt & Co.
KisselKar	Pacific KisselKar Branch
Olson Ford Attach.	United Motors Co.
Signal Truck, Avery Tractor	C. S. Anthony
Nash	Troy Motor Sales Co.
Overland	Willys-Overland Co. of Cal.
Stewart	Carlton, Shepard, Bowles
Vim	Harold L. Arnold
Barnett Auto Body	Barnett Auto Body Co.
White	Pioneer Com'l Auto Co.
Service	Service Truck Co.

ACCESSORIES.

U. S. Compressor Co.	Panama Lubricants Co.
M & M Oil Co.	Auto Theft Signal Sales Co.
Salt Lake Railroad	Brown & Caine, Inc.
Internat'l Sales Co.	Auto Gear & Parts Co.
Western Auto Elec. Co.	Stifler & Shannon
Lichtenberger-Ferguson Co.	Champion Spark Plug Co.
Cambria Spring Co.	L. Sonneborn Sons
Miller Carburetor Sales Co.	Luard & Tetzlaff
Pacific Ball Bearing Co.	Specialties Mfg. Co.
Savage Tire Corporation	Smith-Booth-Usher Co.
Teel Ford Starter Co.	M & H Novelty Co.
Ahlberg Bearing Co.	Ensign Carburetor Co.
Puente Oil Co.	Pacific Auto Sales Co.
Tire Construction Co.	Richfield Oil Co.
Sterns Tire & Tube Co.	Kaufman & Sons
Safetyford Starter Co.	Air Safe Inner Tire Co.
Rule & Sons	Hamilton Spring Shock Abs.
Pacific Rubber Co.	Block-Scherfee Vaporizer
Hobbs Storage Battery Corp.	Austin-Bryant & Carter
United States Spring Co.	Presto-Cloth Co., Toledo.
Firemen's Fund Ins. Co.	

Ford Accessories Show a Success

The first annual national exposition of Ford accessories, held in Chicago, Ill., Sept. 22-29, was an undoubted success, both financially and with regard to the attendance of jobbers and the public. Especially notable exhibits were those of the Bailey Non-Stall Differential Corp., the Wire Wheel Corp. of America, the Perry Auto Lock Co. and the Smith Motor Truck Co. Much interest was aroused by the coming of the famous "Hyatt Roller," which has carried the same Hyatt bearings through its journeys amounting to over 274,000 miles over the United States. Los Angeles and the Coast in general had excellent representation among the exhibits. The stock Ford which was driven from the former city arrived during the show; it was equipped with Bailey non-stall differential and Crump's auxiliary transmission, made by the L. & B. Truck Mfg. Co., of Los Angeles. It would have been mud-bound in Iowa but for its extra equipment. So hard was the going that twenty-six tire changes were necessary. Another unusual feature was a converted one-ton Denby truck with a special body, the "auto cruiser," which carried five people in comfort from Boston to Seattle, and which is the invention of Commodore Robert E. Magner of Seattle, Wash.

National Shows' Space Drawn

Exhibitions at New York and Chicago Will Have More Exhibitors Than in Former Years

THE DRAWING for space at next Winter's National Shows in New York and Chicago was held Oct. 4 at a general meeting of the National Automobile Chamber of Commerce, in New York, with more than 100 companies represented. The number of exhibitors for both cars and accessories is greater than for any previous shows and all the space on the four floors of Grand Central Palace and the Chicago exhibition buildings will be filled to overflowing. The New York show will be held the week of January 5 to 12, and the Chicago show from January 26 to February 2.

At the regular October meeting of the Chamber more than 100 automobile manufacturers discussed the new 3 per cent tax on the industry imposed by the War Revenue bill, which became effective October 4. It being the intention of Congress in placing this tax that it be paid by the buyer of the car, it was the decision of the meeting that the amount of the tax should be added as a separate war item on each car and truck sold.

It was voted to subscribe \$50,000 of the organization's funds in the second issue of the Liberty Loan, and also to carry bonds for employees of the Association.

New members elected include the Barley Motor Car Co., Kalamazoo, Mich.; Elgin Motor Car Co., Chicago, Ill.; Republic Motor Truck Co., Alma, Mich.; G. A. Schacht Motor Truck Co., Cincinnati, O., and Stegeman Motor Car Co., Milwaukee, Wis.

New divisions of the Chamber were voted upon, to be known as the passenger car division and motor truck division, to be headed by Vice-presidents H. H. Rice for the passenger cars and Windsor T. White for the trucks.

S. A. Miles, the show manager, stated that with the addition of non-members who have applied, the number of

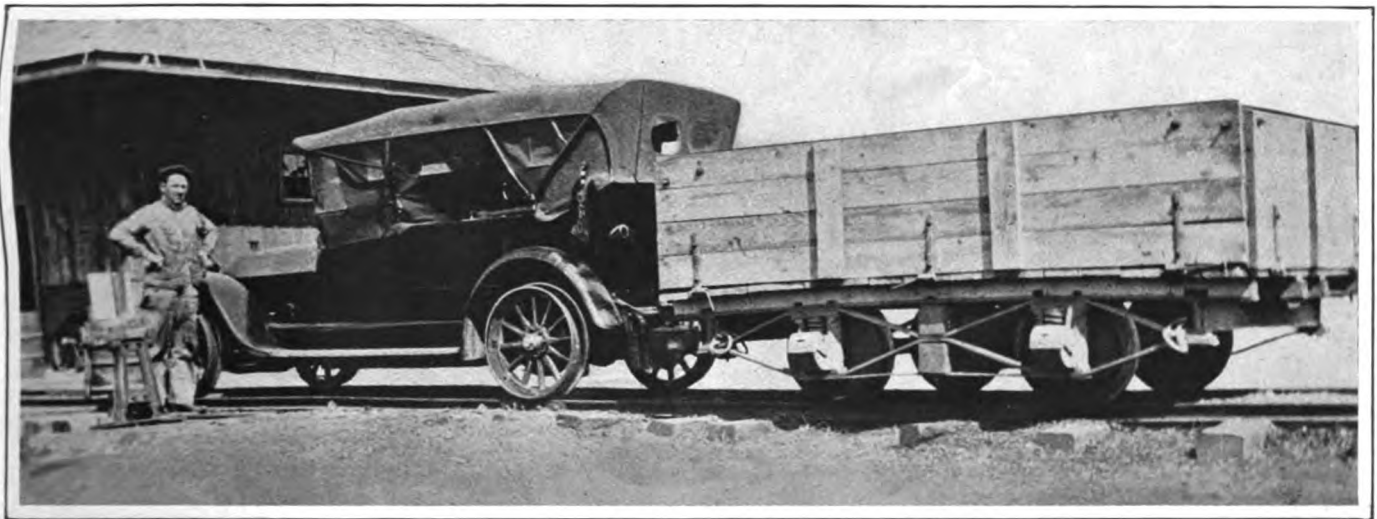
car exhibitors will be greater than ever before, while the demand for the display of accessories and parts exceeds all previous records. The Motor and Accessory Manufacturers has applications to allot space to about 100 of its members, and when the final allotment of accessory space is made the total will reach close to 300 for each show.

The following makes as members of the National Automobile Chamber of Commerce were served at the first drawing for both shows: **Gasoline**—Abbott, Allen, Aperson, Auburn, Austin, Briscoe, Buick, Cadillac, Case, Chalmers, Chandler, Chevrolet, Cole, Columbia, Crow, Davis, Detroit, Dodge, Dorris, Dort, Elgin, Elkhart, Empire, Fiat, Franklin, Grant, Glide, Hackett, Hal, Haynes, Hudson, Hupp, Interstate, Jackson, Jordan, King, Kissel, Kline, Lewis, Lexington, Liberty, Marion-Handley, Marmon, Maxwell, McFarlan, Mercer, Mitchell, Moline, Monroe, Moon, Nash, National, Oakland, Olds, Overland, Owen, Packard, Paige, Paterson, Peerless, Pierce-Arrow, Premier, Regal, Reo, Roamer, Saxon, Scripps, Standard, Stearns, Stephens, Studebaker, Stutz, Velie, Westcott, Willys, and Winton. **Electrics**—Anderson, Baker, Milburn, Ohio, and Wood. The Glide, Dorris, Hackett and Stephens will be shown at Chicago only, while the Kline will be exhibited at New York only.

Space was allotted to the following concerns, not members of the N.A.C.C.: American, Harroun, Monitor, and Stanley (steam). The American will exhibit at the New York show only, while the others will be at both shows.

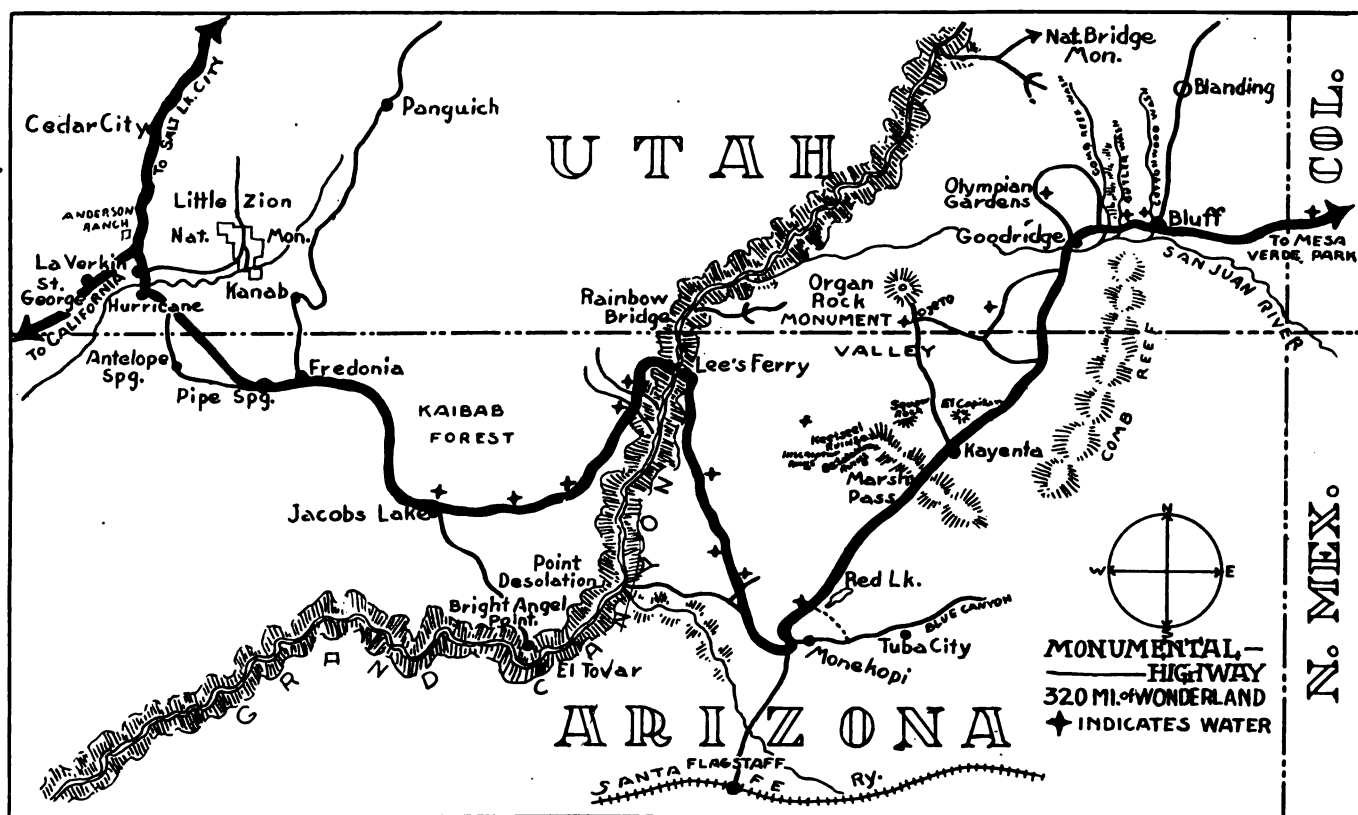
Big Fleet of Cars Required by Aero Corps

Some idea of the motor power which will be required by the aero corps of the United States Army for the European war may be obtained from the statement that with the 22,000 airplanes in use there will be required approximately 43,000 trucks, 13,000 passenger cars and 47,000 motorcycles. Each squadron of the airplane division requires 24 trucks, seven passenger cars and 25 motorcycles. For each airplane there will in all probability be an extra motor. The total number of motors used in this one division of the army will be close to 125,000.



A CHALMERS SIX, WHICH DOES THE WORK OF A LOCOMOTIVE ON A 12-MILE RAILROAD

The illustration shows a Chalmers Master Six in regular service as a locomotive over the Warner & Webber Falls Railroad Co. of Oklahoma. This railroad runs the 12 miles between Warner and Webber Falls. The Chalmers pulls two freight cars over the 2½ per cent grade with loads of from 5,000 to 25,000 pounds three scheduled trips every day and sometimes several extra trips. Carrying these loads, it takes from 30 to 45 minutes to cover the 12 miles. It is the regular Chalmers Master Six in all respects except the flanged metal wheels to fit the rails. The car can be converted into an automobile for road use in 30 minutes. It was driven 20,000 miles before being put in service as a locomotive. The car carries seven passengers in addition to hauling two freight cars. The passenger fare is 50 cents one way.



MAP OF THE MONUMENTAL HIGHWAY, THE WEST'S NEW WONDER ROUTE FOR THE AUTOMOBILE TOURIST.

The Monumental Highway

New Motor Route Through Northern Arizona is Replete With Scenic Wonders Throughout Its Length

OWING to the gates of Europe being closed to the multitude of tourists who annually have made their pilgrimage there, the American people are coming to realize and are developing, as never before, their own boundless and most wonderful scenic attractions. The latest of these may be considered the new Monumental Highway, which passes along the Utah-Arizona boundary through Monumental Valley, along the north rim of the Grand Canyon to St. George, connecting Colorado and the East with California via the Arrowhead Trail from St. George. The wonderful country through which this route passes has been recognized for its beauties, but has always been considered inaccessible to the traveling public. A carefully prepared automobile log of the Monumental Highway, however, has at last been made.

The new route, which has been named the Monumental Highway, begins at the Mesa Verde Park in Colorado, which contains the largest and best preserved ruins of the ancient cliff dwellers and which alone was visited by 7,000 tourists last year, and runs to Bluff, Utah. Bluff is in the heart of the Navajo Indian country, and from here a side trip by pack-train, taking some four or five days, may be made to the Natural Bridge Monuments, a sight of its kind unmatched in all the world. Leaving Bluff, the route passes along the San Juan River, crossing it at Goodridge on a substantial suspension bridge. A few

miles further on it enters the picturesque gateway of Monument Valley, part of which lies in Utah and part in Arizona. Most prominent among the Valley's many monuments are the gigantic Organ Rock, El Capitan and the Mittens. From Moses Rock the water gushes forth seemingly at the command of the old leader of the biblical story.

The route then leads southwesterly to Kayenta, an Indian trading post. From here many Eastern investigators have been guided by pack-trains to the Rainbow Natural Bridge and to view the amazing ancient cliff dwellings—Keetseel ruins, Inscription House ruin, Betata Kin ruin, all of which have been until lately inaccessible to the average tourist. Thence southerly over a beautiful road, crossing Marsh Pass, brings the traveler to the quaint trading post at Red Lake, reminding one of the ancient monasteries of Europe. Two hours' run further on is Tuba City, the center of this Indian reservation, where large Indian schools are located. Tuba City is connected with the south by automobile stage to Flagstaff on the Santa Fe railway. Moenkopi, one of many Hopi Indian villages, is a short distance away, where interesting native life, customs and industries are seen at first hand. Another pleasant side trip from Tuba and one that will long persist in the spectator's memory, is the view from Point Desolation, where the Little Colorado pours its flood into the turbulent waters of the mighty Colorado River.

Beyond Tuba the route follows north to Lee's Ferry, passing along the wonderful multi-colored range called Echo Cliffs. Crossing the ferry, the route enters an open cattle country, leading on to Houserock, the center of Bar Z ranch, where the typical scenes of cattle roping and branding are daily occupations. Continuing, over a good road, the route climbs up onto the Kaibab Plateau

and winds in and out among the millions of trees in the Kaibib Forest, all the four-footed inhabitants of which are secure from harm under the zealous authority of the United States government. Jacobs Lake forest range station is a pretty camping spot in the midst of the forest. Two hours' journey beyond, over a fine automobile road, brings the traveler to the northern brink of the Grand Canyon of the Colorado.

The English language, as has often been said before, is powerless to express the majesty of these wonderful sights—Bright Angel Trail, Inspiration Point, Point Sublime and El Tovar, 20 miles away on the opposite bank. Leaving the Canyon, the highway runs through Fredonia, crossing the Utah line north to Kanab, thence on to Dixie Land, St. George and Little Zion Canyon, a half day's trip apart. Finally the Monumental Highway connects with the Arrowhead Trail, which runs southerly into Southern California or northerly to Salt Lake City.

Combining as it does the wonderful scenic attractions, most interesting ruins of prehistoric Americans and a direct route to California, the Monumental Highway offers a thousand unique diversions to automobile tourists.

"Stop—Look—Listen"

Regardless of the danger known to exist at railway crossings at grade, there are many automobile drivers who approach and traverse these danger points with apparently little concern of possible consequence. Casualties

are sure to result under such circumstances and usually without redress against the railways on account of their own contributory negligence.

In the 1916 Accident Investigation Report of the State Railroad Commission of California, the following appears: "The investigations of the accidents in which automobiles or motor-driven vehicles have been involved at highway grade crossings since such investigations have been instituted by the Commission and covering a period of over two and one-half years have not revealed a single instance where a fatality has occurred due to negligence on the part of the railroad."

The Pacific Electric is earnestly doing its part in endeavoring to protect the traveler on the highway, not only in providing and maintaining at heavy expense a reliable warning signal, visible and audible, but also in requiring motormen to observe extreme care in approaching highway crossings.

On the other hand, the automobile driver must do his part, which requires only the exercise of reasonable caution in approaching a railroad crossing, which is in itself, a sign of danger and is plainly indicated by the old style fixed sign admonishing the traveler to "Stop—Look—Listen"; and in addition, at obscure crossings or where highway traffic is heavy and trains frequent, the automatic flagman with its waving red disc and light and ringing bell, makes a last appeal to the reckless driver who would "beat the train across."



GORGE OF THE COLORADO RIVER, WHOSE WALLS RISE AT PLACES 4,000 FEET HIGH.



ZION'S CANYON, ANOTHER BEAUTY SPOT WITHIN EASY REACH OF THE MONUMENTAL HIGHWAY.

Motor West

LOS ANGELES-SAN FRANCISCO-PORTLAND-SEATTLE

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Established 1907.

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The Most Wonderful Motor Trip in the World

THERE is still room for quite a bit of patching in the highway systems of America's foremost scenic section, the great wonderland west of the Rocky Mountains, but already it is possible to sit back and dream of a continuous one-way motor trip that would checkmate the entire world for an equal.

The extreme western section of the country holds every national park in which automobile touring is permitted—Yellowstone, Glacier, Rainier, Crater, Yosemite, Sequoia, General Grant and Mesa Verde national parks. Add to these wonder places the Grand Canyon, the Columbia River Highway, the Arrowhead Trail and the Georgian Circuit trips, which may be touched on a loop tour connecting all of the parks, and there is provided a combination that would lure tourists in great numbers from all parts of the world, once the possibility of such a trip were properly presented.

Thus far no motor car has ever visited all of these treats of nature and no one has ever attempted to outline a path that would connect up the various parks and the other alluring trips without necessitating any duplication of routes.

Speaking from the standpoint of westerners, let us form a mental picture of the map of the western part of the United States and see if we cannot trace a tour that would prove the world's champion.

Let us start from Los Angeles, for no other reason than that in that city is located "Motor West's" main office on the Coast. Sequoia, General Grant and Yosemite National Parks are strung like pearls on a scenic necklace just a day's journey or so to the north. Then, with Lake Tahoe to give added zest to the trip, the tourist could take in Crater Lake, stopping at Lassen Peak en route for a few additional thrills, with perhaps a detour to include Klamath Falls.

Still heading north, the tourist, especially if he be from

the East, will desire to "take in" Portland, Tacoma and Seattle, that wonderful trio of Pacific Northwest cities, not forgetting, of course, a day of thrills on the magnificent Columbia Highway, and a trip through Mount Rainier National Park. Having reached this point, the temptation to traverse the sensational Georgian Circuit could hardly be resisted, even by the most blase traveler.

Heading his radiator eastward, the tourist would then traverse the Sunset Highway and the National Parks Highway to Spokane, the capital of the Inland Empire, and Missoula, where a turn to the north through Kalispell, will bring him to Glacier National Park, which fronts on the Canadian boundary.

Having surfeited his eye on the many remarkable scenic wonders in Glacier, he can turn southward towards Yellowstone, traveling via Great Falls, Helena and Butte to the northern gate at Gardiner, and after a few days in this father of all the national parks depart via the Cody entrance to the east, and thence via Casper and Cheyenne to Colorado and its wonderful array of government-protected pleasure grounds. Rocky Mountain, Estes and Mesa Verde Parks, and, indeed, all of Central Colorado, furnish thousands of vantage points from which to view the mighty range.

The mysterious Southwest, with its Grand Canyon of the Colorado, its Petrified Forest, its numerous national monuments, its ancient cliff dwellings and other attractions, offer sensations galore to the motor tourist with an eye for the beautiful. The roads may not be of the best, but the reward in the way of the gratification of the senses far outweighs any hardships to which the traveler may be subjected en route.

After visiting Grand Canyon, it is not such a long or

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24TH, 1912

of MOTOR WEST, published semi-monthly at Los Angeles, California, for October 1, 1917.

STATE OF CALIFORNIA, ss.
County of Los Angeles.

Before me, a notary public, in and for the State and county aforesaid, personally appeared George M. Schell, who, having been duly sworn according to law, deposes and says that he is the editor and business manager, of the MOTOR WEST and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to-wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Name of—	Post Office Address—
Publisher, Geo. M. Schell.....	Venice, Calif.
Editor, same.....	Same
Managing Editor, same.....	Same
Business Manager, same.....	Same

2. That the owners are: (Give names and addresses of individual owners, or, if a corporation, give its name and the names and addresses of stockholders owning or holding 1 per cent or more of the total amount of stock.)

Geo. M. Schell	Venice, Calif.
F. Ed Spooner	Detroit, Mich.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is (This information is required from daily publications only).

Sworn and subscribed before me this 24th day of September, 1917.

FLOYD ANDERSON,
My Commission expires March 14, 1921.

Bad Roads Turn Travel South

Northern California Worried Over Possibility of Lincoln Highway Tourists Coming to Los Angeles

THERE has been much concern manifested in Northern California lest the officials of the Lincoln Highway Association should definitely abandon San Francisco as the western terminus of that great transcontinental road in favor of Los Angeles, which seems to be much more interested in good roads work than its northern neighbor.

The following authoritative announcement of the Lincoln Highway officials will explain their attitude regarding the rivalries of San Francisco and Los Angeles in this matter, and will possibly have the effect of waking up the former to the danger of losing their advantage as the western terminus of the highway unless steps are immediately taken to improve that portion of the main route between Ely and Reno:

The Lincoln Highway Association, while primarily interested in the rapid improvement of the Lincoln Highway from New York to San Francisco, has also been instrumental in bringing about improvement upon the main feeder roads which connect up with the Lincoln Highway.

The Association has found that during the past two years a very large proportion of transcontinental traffic has turned southwest at Ely, Nev., and followed the Midland Trail from that point to Los Angeles, and the Association has received so many requests from all parts of the country asking for information relative to this route that it was felt advisable for the Association to gain first-hand knowledge of the conditions.

Secretary A. F. Bement and Field Secretary H. C. Ostermann, accompanied by G. S. Hoag, Nevada State Consul for the Association, have just completed a trip by motor car from Ely, the junction point of the Lincoln Highway, and the Midland Trail, over the latter road via Tonapah, Goldfield, Mojave and Big Pine to Los Angeles. During the trip very careful observations were made as to road conditions, mileages, accommodations, water and scenic attractions, and photographic views of the region were obtained for the Association's records, with the result that complete advice concerning this popular tributary will be published in the next edition of the Lincoln Highway Guide.

Secretary Bement reports conditions on the Midland Trail as being 80 per cent good, about 10 per cent fair to poor and 10 per cent bad, but states that improvements now contemplated in Nevada and California will rapidly tend to eliminate the scattered 10 per cent of bad roads. Water, so highly important to the tourist motoring through this part of the country, is, if anything, more frequently encountered on the Midland Trail from Ely to Los Angeles than on the Lincoln Highway from Ely to Reno.

The Lincoln Highway Association is in duty bound to advise the thousands of transcontinental tourists truthfully and accurately regarding the best routes for reaching the Pacific Coast, and the notoriously poor condition of the Lincoln Highway between Ely and Reno has been deterring hundreds of tourists from essaying the drive from Salt Lake City to Reno. They have been following the Midland Trail into Southern California in increasing

arduous journey to the Zion Canyons, which are located within easy reach of the Arrowhead Trail, which in itself offers much in the way of scenic beauty to the traveler, and is, indeed, the recognized best route from Salt Lake City to Los Angeles, the terminus of this most wonderful itinerary to be found in the world.

numbers. Unless some effort is made in Northern California and Nevada toward improving the trans-Nevada Lincoln Way, the Southern California metropolis will enjoy nearly 90 per cent of the transcontinental traffic during the coming season.

Overland Trail Club Improving Northern Nevada Road

The Overland Trail Club was organized at Reno, Nev., February 25 of the present year for the purpose of securing the moral and financial support of all residents and others interested in the betterment of the roads through Northern Nevada running alongside a transcontinental railroad, with water from the Humboldt River close by, through the most fertile valleys in the State, where telephone and telegraphic communication, first-class supply stations and good hotel accommodations are to be had.

The main difficulty the club had to contend with was 45 miles of road that could not be depended upon for any length of time. This road lays between Fanning and Wadsworth. Immediately after organizing, the club began the work or repairing an old railroad grade, which had been abandoned by the Central Pacific Railroad.

Money for the purchase of culverts was raised and through volunteer labor the old grade was rebuilt, and is now, with the exception of two or three places, in good condition from Reno to Lovelock, a distance of 97.3 miles. The running time between these points has been reduced to three and one-half hours.

As many as 125 men, on many occasions, have gone out for one day and installed culverts, bridges, dragged and cleaned the roads and, more particularly, the old railroad grade, with the result that the former "missing link" is now one of the best roads of the Trail.

The route follows the line of least resistance, the Humboldt River, in its course through Northern Nevada. There are no summits to climb.

French Believe War Will be Over Next Year

Eddie Rickenbacher, now in France with the American army, has written friends here on the Coast that a French maker has already offered him terms for driving a French racing car in this country next year. Rickenbacher says that work has been started upon this car already. Alexander Churchward, of the A-B-C Starter Co., has received advices from a financial firm of France, representative of his company, stating that they are going ahead with the building of the plant and preparations to manufacture at an early date. Both of these incidents would seemingly indicate that in France they believe the war will be over at least by winter.

Calendar of Coming Events

October 27—New York Speedway Races.

November 12-17—Annual Show Los Angeles Motor Car Dealers' Association, Harris M. Hanshue, secretary.

November 12-18—Denver, Colo., Annual Show, Auto Trades Association, G. A. Wahlgreen, manager.

January 5-12, 1918—New York National Show.

January 26-February 2—Chicago National Show.

February 16-25—Annual San Francisco Show, Geo. A. Wahlgreen, manager.

March 2-9—Boston Show.

*A.A.A. Championship Award Event.



Feeding Sammies En Route

Mobile Army Kitchen, Mounted on Four-Ton Riker Truck, Will Insure Warm Meals for Soldiers

A NEW type of mobile army kitchen was demonstrated recently at New Haven, Conn., on Yale Field. Seventeen hundred and fifty men of the 102nd Infantry were fed in less than an hour. The new kitchen will serve three hot meals a day to a force of 2,000 men and can provide enough coffee for 1000 men every 10 minutes.

The Taft Army Field Kitchen, which is practically a steam hotel kitchen mounted on a motor truck, is the invention of J. C. LaVin, manager of the Hotel Taft. Associated with him in the development of his idea were C. M. Bradford, who supplied the Riker truck chassis on which the unit is mounted, and H. D. Baldwin, who built the body.

United States Army officers who witnessed the demonstration in New Haven declare that the Taft Kitchen will probably revolutionize existing conditions of feeding armies, and that compared to it the much-vaunted mobile German soup kitchen looks like a toy.

Mr. LaVin selected for the mounting of his kitchen a four-ton Riker truck, which has proved by its excellent service on the European battlefields and the Mexican border that it can stand up and do its work under war conditions. The kitchen proper consists of a 10-horsepower steam boiler, two 90-gallon stew, soup or pot-roast kettles, and two 50-gallon coffee urns. The kettles and

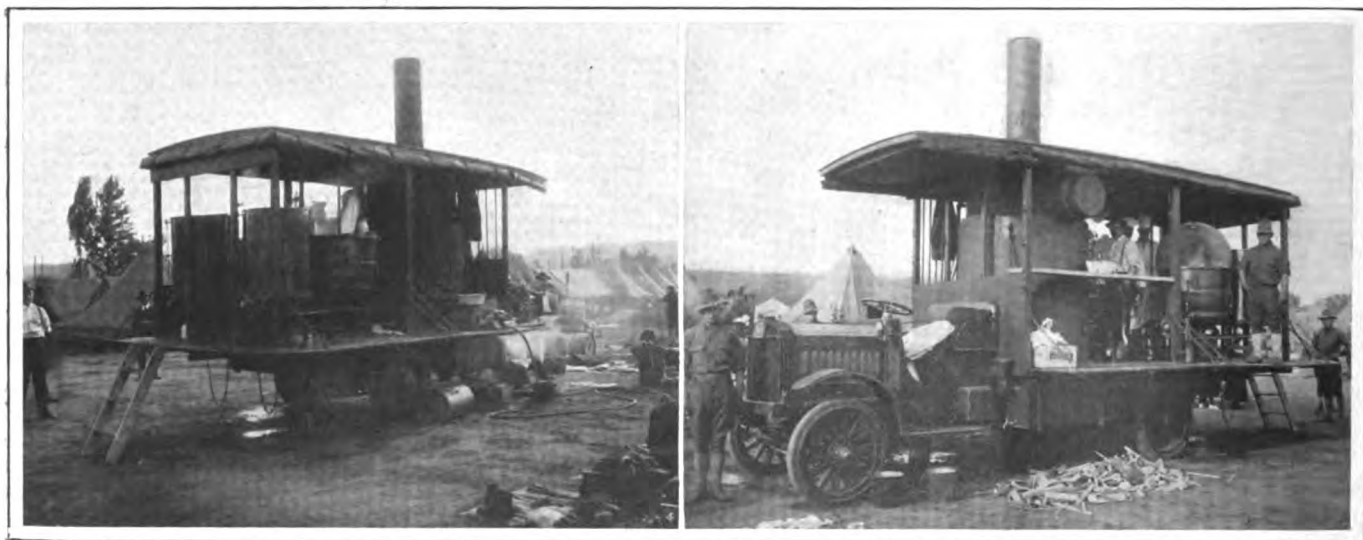
urns are heated both by steam jackets and by live steam injection. at the demonstration at Camp Yale coffee was boiled, from dead cold, in less than six minutes. So compact and well planned is the arrangement that the Taft Kitchen, with two cooks, displaces two company kitchen units of 80 men and 40 horses. Two of these mobile units will feed a full regiment, either in camp or on the march. Being capable of a speed of almost 15 miles an hour, the unit can precede its battalion on the march, cooking a meal on the road, and be ready to serve hot food immediately the battalion halts. When the troops entrain the kitchen is put on a flat car and goes right on cooking.

There is another way in which the Taft unit is an immeasurable improvement over the old methods—in the cleaning of mess kits after meals. Anyone who has ever seen a company of soldiers all trying to clean their kits in three iron kettles full of grease, pieces of unused food and a little warm water will realize what a blessing unlimited boiling water and live steam will be.

It is planned to add to the equipment a six kilowatt generator to be operated by the Riker truck engine. This would furnish sufficient current for a 40-candle power lamp in the tent of each officer, for a 12-inch searchlight and for field wireless apparatus.

Briscoe Designs One-Ton Truck

The Briscoe Motor Corp., Jackson, Mich., has designed a one-ton truck which is interchangeable in many of its parts with the Briscoe model 24 passenger car. The truck has a wheel base of 132 inches. Final drive is by chain, the clutch is of the cone type and the transmission is mounted in unit with the jackshaft. The truck is listed at \$1,000 and is equipped with electric starter and windshield.



TWO VIEWS OF THE LA VIN MOBILE ARMY KITCHEN, WHICH IS MOUNTED ON A FOUR-TON RIKER TRUCK.

Reddenizing the Ford into a Truck

Simply sliding over and bolting to the frame of the Ford pleasure car, the Redden Truck-Maker, manufactured by the Redden Motor Truck Co., Inc., Chicago, Ill., quickly develops a light, sturdy and rapid-moving commercial vehicle, having a wheel base of 128 inches and a carrying capacity of 2,000 pounds. Final drive to the wheels is by chains running on the Ford axle, which thus acts as a jack-shaft. The load carrying axle of the attachment is of solid steel. The heavy channel steel frame slides over and is bolted through the pleasure car frame, forming a splice as rigid as a lap weld and preventing any weaving or twisting of the frame. The length of the truck-making frame, back of the driver's seat, is 8 feet, 10 inches. The brakes are large emergency brakes with enclosed drums on the rear wheels, expanding type, operated by hand lever. There are extra service brakes on the Ford brake drum inside the bell-shaped sprockets. The sprockets eliminate the necessity for cutting off the Ford axle by making it easy to bolt the sprockets on the casings with lock washers and nuts. The spring hangers and spring shackles are extra heavy castings and permit of extreme overload. The artillery wheels and solid tires are oversize. The Redden Truck-Maker is manufactured by the Redden Motor Truck Co., Inc., under the license of the Cook patent, which protects this method of converting pleasure cars into trucks from infringement. It is sold for \$350, f.o.b. factory.

High-Powered Used Passenger Cars for Truck Units

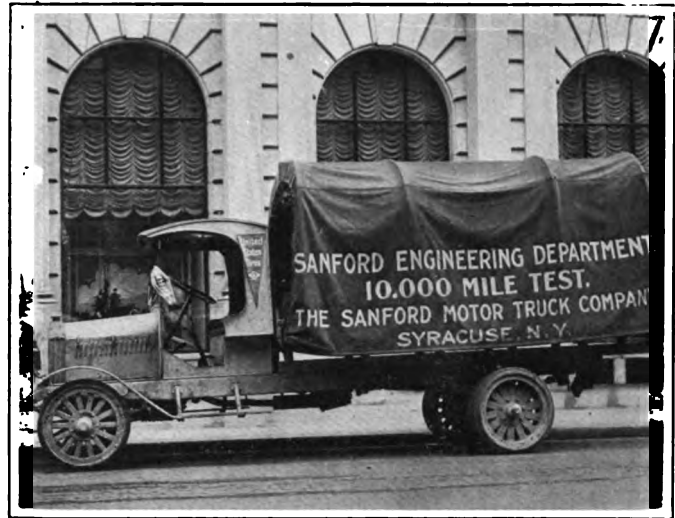
Truck unit manufacture answers the question, "What will we do with the used car?" The future of the truck unit industry would thus seem to have a direct bearing on the success of the passenger car business. Among the first manufacturers to realize the importance of quality truck unit manufacture was President Fred Paterson, of the Detroit Truck Co.

Most truck units are designed for converting Fords, or other light pleasure cars. But there is no reason, according to Mr. Paterson, why truck units for the conversion of the higher-powered passenger cars should not have their place, although it seems probable that the lower cost of operation and maintenance of the lighter cars will make them more acceptable to the generality of those who utilize the truck unit.

Fulton Motor Truck Co. Preparing to Expand

As a preparation for plans to expand into the largest exclusive builders of one and one-half ton trucks, the Fulton Motor Truck Co. is increasing the installation of its power, heating and lighting plant at Farmingdale, L. I., where the Fulton plant is located, according to information just given out by William F. Melhuish, Jr., president and general manager. The company also has put down its own water wells and pumps the water throughout the plant by the use of air compressors, thus having its own fire protection. The Fulton company has purchased and will shortly install semi-Diesel engines as the motive power to furnish power, light and heat in the factory.

Spokane, Wash.—The Dirks Motor Supply Co., capital \$25,000, has been incorporated by B. H. Dirks and A. G. Mitchum.



3 1/2-TON SANFORD TRUCK ON CROSS-COUNTRY TRIP.

U. S. Tire-Equipped Sanford on Long Trip

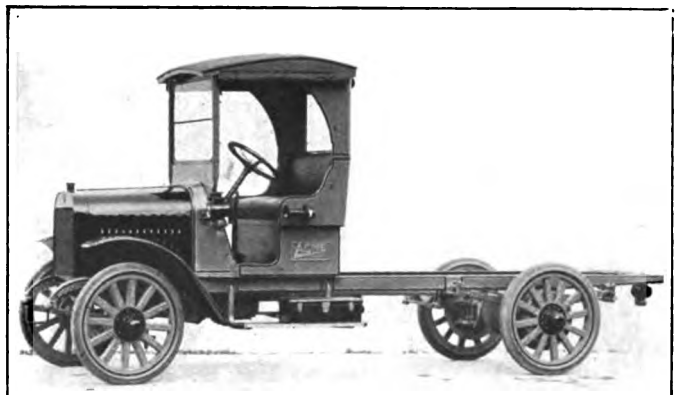
A three-and-one-half-ton Sanford truck, driven by J. A. Nolan, service manager of the Sanford Motor Truck Co., Syracuse, N. Y., recently completed the first half of a 10,000-mile journey. The truck, built on approximate army specifications, was equipped with 36x5 single front and dual rear pressed-on United States tires. The journey, starting at Syracuse, was through Buffalo, and then on by a devious route through Pittsburgh, Baltimore, Philadelphia and New York. Nolan's orders from the factory was to put the truck through the most merciless usage possible on the journey.

Motor of One-Ton Acme Truck Made Larger

Continuing its policy of improving its product at every possible point, the Cadillac Auto Truck Co., Cadillac, Mich., manufacturers of the Acme line of 1, 2, and 3 1/2-ton worm drive trucks, has made a decided improvement in its 1-ton model by equipping it with a larger bore motor.

The 3 1/2x5 Continental motor formerly used, though giving good satisfaction, has been replaced by a Continental 3 3/4x5 power plant. With this larger motor, considerably more power is developed.

The constant mesh transmission, a feature of all the Acme models that has been giving excellent satisfaction, continues to be used, and this unit in conjunction with this larger motor and high-grade Acme units and construction is rapidly creating a heavy demand for the powerful 1-ton Acme.



ONE-TON ACME TRUCK WITH ENLARGED MOTOR.

KISSELKAR ALL-YEAR Car

AT EACH one of our seven branches, you will find a special display, during ALL-YEAR Car Show Week, of the most advanced development of the two-cars-in-one idea.

You will see the new HUNDRED POINT SIX, the car of a Hundred Quality Features and its wonderful Kissel-built power-plant. Also the DOUBLE SIX, Kissel's new 7-passenger touring "twelve"—

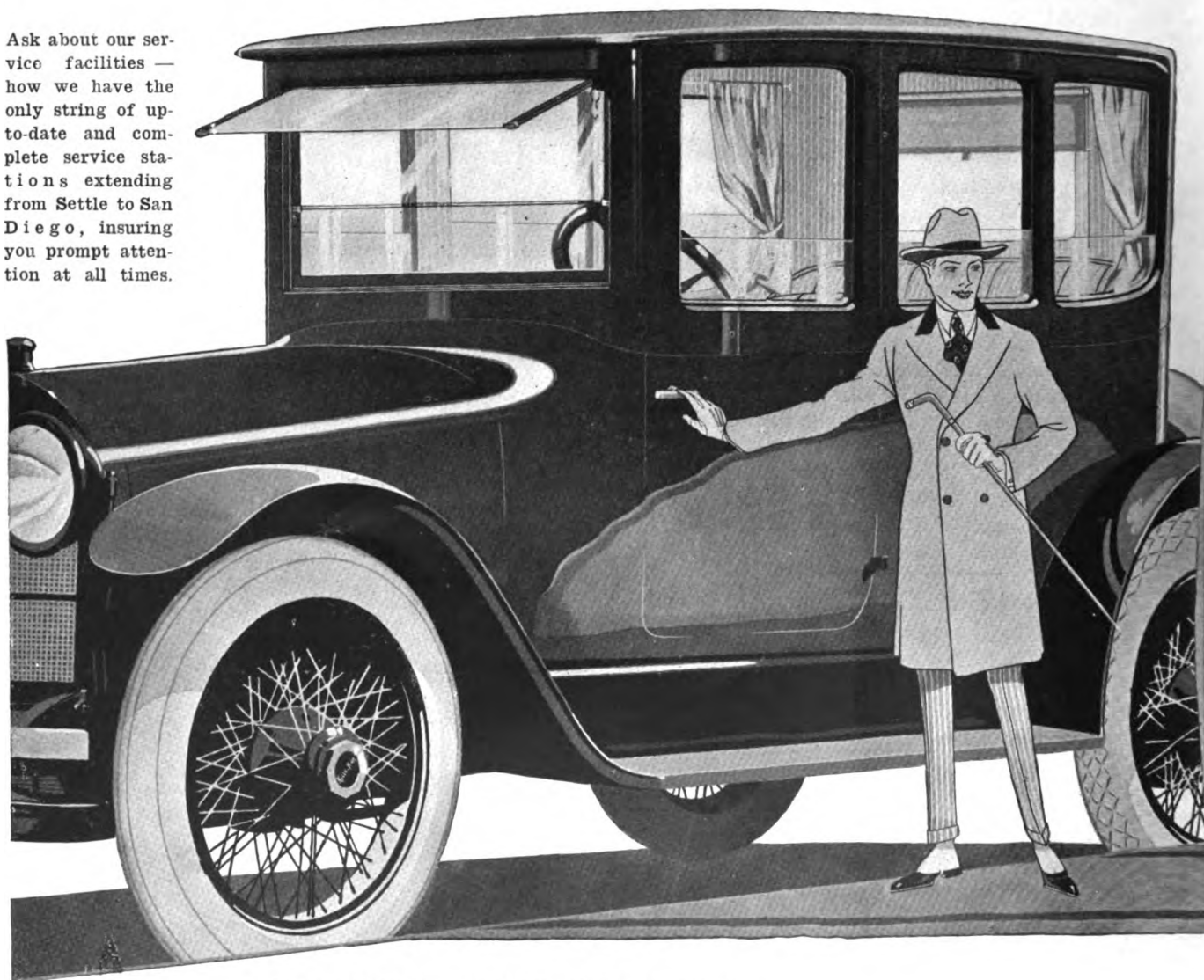
You will see how the ALL-YEAR Top is BUILT IN—not on, with no visible fastenings or attachments, how the rigid construction permits no rattles, draughts or leaks—how it is entirely removable, giving you a wide-open, roomy, roofless touring car. Don't miss the nearest exhibition.

PACIFIC KISSELKAR BRANCH

SAN FRANCISCO—VAN NESS AT GEARY

PORTLAND LOS ANGELES OAKLAND FRESNO SAN DIEGO SEATTLE

Ask about our service facilities—how we have the only string of up-to-date and complete service stations extending from Seattle to San Diego, insuring you prompt attention at all times.



In 1915 Kissel introduced his original two-cars-in-one idea. Experienced car buyers in Seattle, Portland, Spokane, Oakland, San Francisco, Los Angeles, San Diego, Fresno—and all other leading centers on the

Mention "Motor West," Please, When Writing to the Advertiser

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Show Week

October 13th to 20th

Kissel's Original Idea that
Changed the Motoring
Habits of a Nation



Pacific Coast were quick to appreciate what such an innovation meant—the actual enjoyment of two cars at the cost of one.



The ALL-YEAR Car—Detachable Sedan top mounted on **Hundred Point Six** 4-passenger Gibraltar Sedanlet body and same car with new Semi-Victoria Style Summer Top. Price complete, \$1885.



The ALL-YEAR Car—Detachable Sedan top mounted on **Hundred Point Six** 5-passenger Staggered Door Gibraltar touring body and same car with new Semi-Victoria Style Summer top. Price complete, \$1885.



The ALL-YEAR Car—Detachable Sedan top mounted on **Hundred Point Six** 5-passenger Gibraltar touring body and same car with top detached. Price complete, \$1735.



The ALL-YEAR Car—Detachable Coupe top mounted on **Hundred Point Six** 4-passenger Gibraltar roadster body and same car with top detached. Price complete, \$1735.



The ALL-YEAR Car—Detachable Town Car top mounted on **Hundred Point Six** 5-passenger Gibraltar Victoria body and same car with Victoria top. Price complete, \$2050.



The ALL-YEAR Car—Detachable Sedan top mounted on **Double Six** 7-passenger Gibraltar touring body and same car with top detached. Price complete, \$2650.



Tractors as Road Builders

Peculiarly Fitted for This Work, as They Are Economical, Thorough and Always on the Job

TRACTORS are generally referred to nowadays as farm tractors, and it is true that the great majority of them are now used in agricultural work. It must not be supposed, however, that all of the modern tractors are limited in their work to the farm, as many of them are also adapted for freighting, logging, general engineering and contract work of various sorts, and particularly road building.

Each class of work puts special requirements upon the tractor, and it must therefore be a tractor of all-around usefulness that is able to handle all the above classes of work satisfactorily. Road building is especially severe. In order to be a success in this class of work the tractor must be able to go into virgin land, pull down trees, up-root stumps and clear the right-of-way of boulders and other obstructions. It must travel over rough ground, haul rock, gravel and dirt for filling-in operations, pull graders, levelers, scarifiers, road graders, rollers and other tools, and handle no end of similar varied work.

When road building with tractors is done under county supervision, the tractors must give satisfaction not only to the supervisors responsible for its purchase, but must be so dependable, economical and efficient in its operation

as to offer practically no occasion for criticism from the public and opposing political factions. When road work is done on contract the same requirements apply only in slightly lesser degree. The contractor who anticipates handling much road work must have a dependable tractor. Competition for road work jobs is generally keen. The tractor equipment, therefore, must be efficient and economical if it is to enable the contractor to make a fair profit. Much road work is subject to forfeit if the work is not completed on time.

The great bulk of road mileage in this country must be of the ordinary improved dirt road for an indefinite time, the paved road predominating only in the cities and thickly-settled districts. In the building of dirt roads the tractor has better opportunity to show its versatility than in any other kind of road construction. It must work on muddy and slippery ground and not lose power through slipping. The weight of the machine must be so distributed that it will not break down culverts or prove an excessive menace to bridges. In order to handle graders or trains of wagons in narrow places without the inconvenience and delay of unhitching and maneuvering, the tractor must be able to turn in a short radius.

If a tractor is able to answer all these requirements, it can handle road work much more efficiently and economically than any other form of tractive power. This has been proven repeatedly to many tractor users. In the state of Montana alone there are more than twenty counties doing their road work with caterpillar tractors, this type proving especially useful for this class of work because it possesses all the requirements of the ideal road

building tractor. Caterpillar tractors are in use in Washington, Idaho, Oregon, Nevada, California and Arizona. Humboldt County, Nevada, is using a caterpillar tractor to pull ten 2½-yard wagons full of gravel. This machine graded as much as seven miles of road in eleven days, pulling two road graders and handling the work at a cost of \$30 per mile. Powell County, Montana, plowed 59 miles of road in 140 days at a cost of \$58 per mile, using a caterpillar tractor upon which the up-keep expense for two season's work was less than \$25. Another Montana county ran a tractor 2,300 miles in heavy dirt road work with a total repair cost of less than \$10.

The gasoline tractor is pecu-



CATERPILLAR "75" BUILDING ROADS IN A DESERT COUNTRY AT SMALL EXPENSE.

CLYDESDALE



A Great Truck to SELL Because A Great Truck to OWN

The Clydesdale (so named after the great breed of draught-horses) was not designed upon the performance of a few trucks running quietly about the streets of American cities, always within easy reach of a garage.

It was designed in strict accordance with the specifications of British Engineers who learned from grim experience what could be depended upon to work on shell-swept battle-fields—and what could not.

For more than two years practically the entire production of Clydesdales has been

Radiator. The radiator is of the type used by the London General Omnibus—straight copper tubes without fins—of proven suitability in climates most severe on gasoline engine heat-radiation and easiest of repair when necessary. Protector-bars guard core against mechanical injury.

Controller. Krebs Patented Automatic Controller not only prevents overspeeding by driver, but also maintains any speed without constant need of driver's foot being held on accelerator. Unlike the usual so-called governor, it governs the engine-speed at all times, yet does not prevent use of accelerator. It also prevents

absorbed by the British, French and Russians in their governmental service.

But Clydesdale manufacturing facilities have now expanded to such an extent as to permit, for the first time, the acceptance of American business.

If you are established and interested in handling commercial vehicles of the highest class, this is a rare opportunity to connect with a truck that stands on the threshold of a mighty American career. Check up the following refinements—

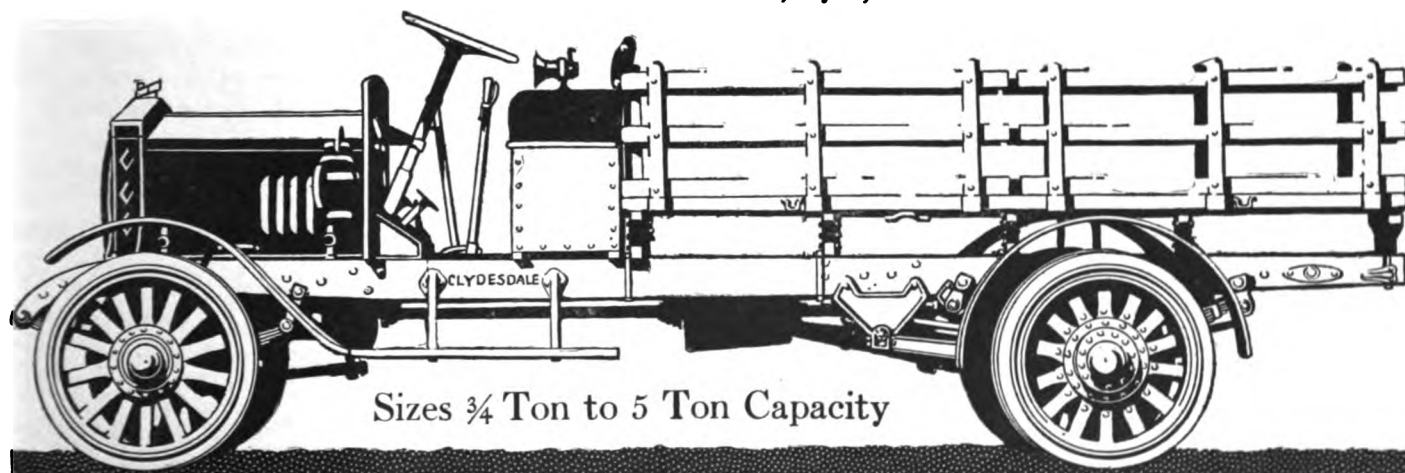
engine racing when throwing out clutch to shift gears.

Frame. The Clydesdale frame is much deeper and, therefore, stronger than usual in American practice, yet it is light in weight. Superior cross-section and a lighter gauge of metal, with proper cross bracing, here bring out the European design at its best.

Transmission. A massive four-speed separate unit gear box, the type absolutely insisted upon by the U. S. and Allied Governments. Located centrally, reducing strain in universals.

Drive. Final drive is by worm gears, the use of which is practically universal on all high-class American and European trucks.

THE CLYDE CARS CO., Clyde, Ohio



Sizes $\frac{3}{4}$ Ton to 5 Ton Capacity

liarily fitted for road building because it runs for hours without need for replenishing the fuel and water supply. One engineer and two men with blade graders can move dirt at a tremendous rate, putting it in the middle of the road and packing it thoroughly with but little loss of time to take on water or fuel. Because of the small delay for fuel and water supply, the gasoline tractor is vastly superior to the steam tractor, and of course so much more

superior to horse power that there is no comparison.

Sometimes the tractor draws a big elevating grader, which plows the dirt from the side of the road and delivers it, by means of an endless apron, to the center, where the tractor packs it as it travels back and forth with the grader. This system is also excellent where the dirt must be moved any distance, for dump wagons catch the dirt delivered by the grader. It is then hauled to any fill which is to be made. Thus grades are rapidly eliminated and fills cheaply made.

When the operators of the big graders behind the tractor are experienced, the sod and loose rubbish on the surface are quickly scraped loose and moved to the center of the road. The graders are so steered that the tractor travels back and forth over the center of the road, packing it thoroughly and firmly. Later cuts with the graders move more solid dirt up on top of the sod. This solid dirt is packed together and a firm, well-crowned road bed is the result. A great proportion of the value of roads depends upon proper drainage. It is therefore of vital importance that an earth road be crowned sufficiently to shed rain.

Staupe Mak-A-Tractor

The Staupe Mak-A-Tractor will do the work that requires the combined efforts of four strong horses—in plowing, disking, cultivating and heavy hauling. It pulls two 14-inch bottom gang plows, a 16-section concave disk over freshly plowed fields, a four-horse 16-foot drill for seeding, or a 7-foot binder in heavy grain. Turning radius is remarkably small and the Mak-A-Tractor has eleven times the power of a Ford car. The Staupe Make-A-Tractor can be used either with the Ford roadster or touring car without detaching the body and the change can be made in 20 minutes. The special equipment includes a special Staupe radiator with six times the cooling capacity of the Ford radiator, a special multi-blade fan and a special force Ford oiling system. The Staupe Mak-A-Tractor is sold for \$195.

One of these attachments has pulled a 10,000-pound separator; it has pulled an 8,000-pound separator out of mud almost up to its axles and then attached another 8,000-pound separator and pulled both of them through village streets; it has pulled a string of five heavy army supply wagons; it has hauled a 25-ton house over a dirt road; it has pulled a 9,200-pound load of wheat up into a farm elevator and it has accomplished other equally difficult feats. Such an attachment will plow from five to seven acres a day, while four horses will plow an average of about four acres daily. It will help increase crops, as



TRACTOR HAULING 55 TONS OF ROAD BUILDING MATERIAL AT ONE TIME.

the traction lugs on the drive wheels, one of which runs in the furrow, loosens the hardpan, or plow soil, which, by creating a loose seed-bed below the depth of plowing, thereby permits the roots of the plants to grow deeper. It also causes the ground to better absorb and retain the moisture and in this way greatly increases the value of the crops.

This ingenious means for multiplying the value of the pleasure car has been successfully used by farmers and haulers long enough to demonstrate that it is practical, and it will more than double the value of the farmer's motor car.

New Principle Used in Fageol Tractor

The farm tractor which the Fageol Motors Co., of Oakland, Cal., is preparing to build will, the company's engineers state, solve the tractor problem for the orchardist and farmer, and give them a machine which will be superior to anything now on the market. The new tractors are the invention of Rush Hamilton, an expert mechanic and practical farmer, who devoted many years to the study and perfection of his machine before turning it over as completed and ready for the market.

Unlike either the caterpillar or broad-wheel type of tractor, or the convertible automobile tractors in common use today, the Hamilton machine uses an entirely new principle for getting its traction. Instead of flattening the ground in front of the plow or harrow or other machinery being pulled, this tractor draws its farm implements along after having loosened up the soil by its front wheels with their long blade-like teeth.

These blades or teeth on the front wheels of the tractor enable it to walk right over all kinds of ground, and owing to the fact of its being built very low to the ground, the machine can go almost any place the farmer or orchardist wishes to send it. This is a big point in its favor, as heretofore most tractors either could not be used near or under trees without the danger of damaging the limbs or trunks.

The Fageol factory has acquired the rights to the Hamilton invention and will proceed to make them as soon as the new factory is built and the machinery for same installed.

Modesto, Cal.—J. H. Clark & Co. have added the Mitchell car agency.

Woodland, Cal.—Rice & Forrest, Haynes dealers in Sacramento, will open a branch agency here.



GMC trucks are built in all practical sizes, $\frac{3}{4}$ ton to 5-ton capacity—six sizes in all. Each size better suited than all the rest for a certain class of work.

GMC Trucks Back Up the Big Guns—

Battleships and armies, shells and munitions—these are vital needs in our nation's war. Without them victory is impossible.

But important as they are, this war's winning depends in greater measure on our industries. Never must pressure be put on production as now; never have our mills, factories and farms been forced to such supreme efforts.

And aiding in this mighty work, backing our guns at the front, pushing our production at the rear, GMC Trucks are stepping into the breach.

Their steady, sure methods, their never-faltering performance, their strength, ruggedness and power enable them to

surmount trying transportation obstacles.

They do day and night work if necessary, make long trips cross-country over rough roads and difficult grades, haul huge loads at increased speed. They aid the railroads in transportation, help American industry bear up under war's burden.

Just as GMC Trucks are helping thousands of business men in every part of the country—in every line of work, so they can help you in your business. Write us at TRUCK HEADQUARTERS for information on GMC Trucks in your line.

GENERAL MOTORS TRUCK COMPANY

PONTIAC, MICH.

New York Philadelphia Boston Chicago
St. Louis San Francisco
Distributors Most Everywhere



STOCK BRISCOE WHICH MADE GREAT ECONOMY RECORD.

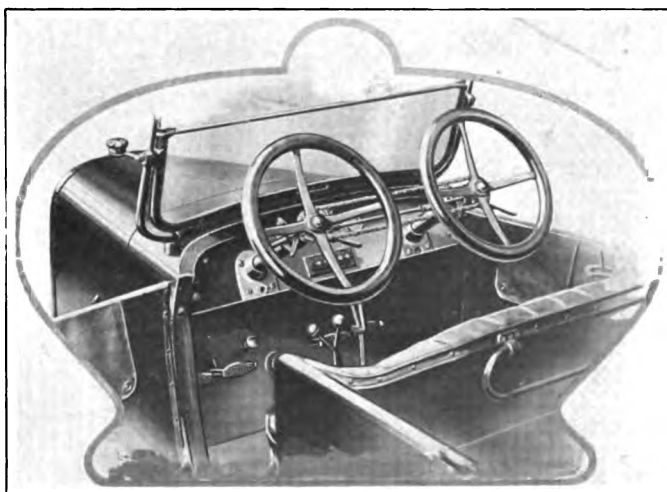
Briscoe Goes 26 M. P. G. On 1300-Mile Trip

Twelve hundred ninety-seven and seven-tenths miles, over heart-breaking roads, on 48 gallons and two quarts of gasoline, or an average of 26.7 miles to the gallon for the entire distance, is a record that any cross-country driver would be expected to boast about. This performance was made by Charles F. Hopkins, Jr., in a brand-new stock Briscoe from Jackson, Mich., to his home city, St. Augustine, Fla. This economy run over the Dixie Highway was not staged as such runs are usually staged. Mr. Hopkins starting out without any extraordinary preparations, and not even taking the advantage that would be given by using high-test gas.

Recent Publications

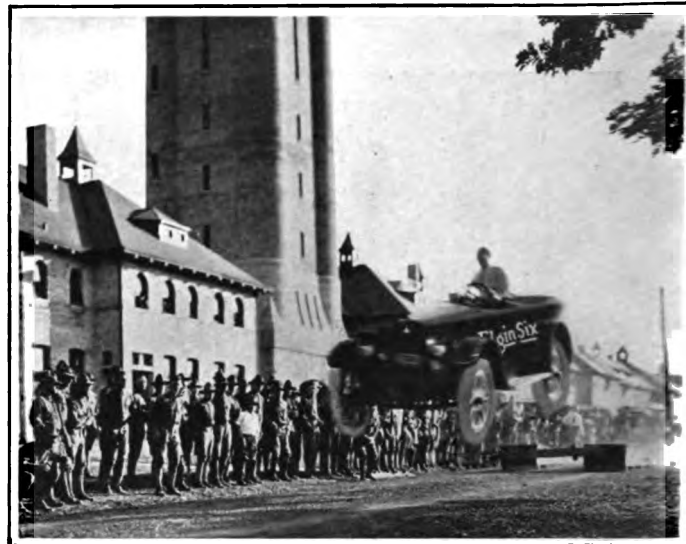
"The Ford Motor Car and Truck and Tractor Attachments," by Harold P. Manly, is a response to the insistent demand for a new book which treats both of the construction, care and operation of the Ford car as well as of the steadily increasing auxiliary uses to which the Ford car is put. The work is sold bound in limp cloth for \$1, or in leather with red edges, for \$1.50. Published by Frederick J. Drake & Co.

The Du Pont Co., of Wilmington, Del., has just issued a very interesting booklet entitled, "The Giant Laborer." It points out and proves the advantage of using Du Pont



DOUBLE CONTROL AVOIDS DANGER IN TEACHING.

This Briscoe car has two steering wheels, two sets of pedals, two accelerators, two everything that comes into play in driving a car, even two push-buttons for the horn. The wheels are connected by an endless chain and the clutch pedals and brakes operate on one shaft, so that either person in the front seat may have complete mastery over the car. With the operating parts all doubled and inter-connected, the teacher has perfect control of the car at all times, and can assume command immediately if danger is ahead.



ELGIN CREATES A JUMPING RECORD.

At Fort Sheridan, Ill., recently, a stock Elgin touring car jumped 4 1/2 feet clear of the ground. In order to perform this unique feat, the car approached the mark at a speed of more than 45 miles an hour, rising on a slight incline 18 inches high at the point of jumping off. The Elgin hurdled through space and alighted safely at a point 60 feet and 6 inches distant. The same car covered 73 feet at Belleville, Ill., on June 18th, 1917.

explosives for various agricultural and miscellaneous uses. The company has also issued a very attractive book entitled, "The Sport Alluring," which gives a very different idea of what one usually thinks the sport of trap-shooting is. Both books will be sent on application.

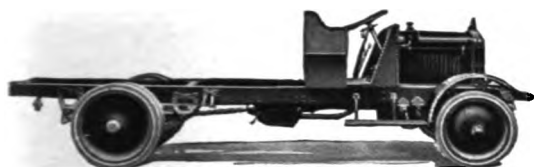
An addition to tire literature which will be welcomed by motorists everywhere, is the booklet just issued by The Goodyear Tire & Rubber Company, Akron, O., on Maximum Mileage, which tells "How to get the Most out of your Tires." The new booklet is the result of years of experience in building miles into tires, and should its message be heeded and put into practice, three-fourths of our annual waste in tires could easily be saved. Tire men agree that three magnificent transcontinental highways could be built yearly with the money spent by motorists for tire mileage which they do not receive. The Maximum Mileage booklet may be secured at any Goodyear Service Station or by writing to The Goodyear Tire & Rubber Co., Akron, Ohio.



WHY SHOULDN'T 'SAMMY' HAVE FAITH IN HIS STUDEBAKER?

Just how soon the "Sammies" shown aboard the Studebaker machine gun cars in these photos will see active service on some sector of the French front is highly problematical, but it is safe to assume that it will not be long. They are highly trained and in perfect fighting trim, due to their experience on the Mexican border, and are "itching for an argument with the Boches." Besides its crew of eight men, each Studebaker machine gun car mounts two of the famous Lewis machine guns and carries 20,000 rounds of ammunition, tools, water, gas and oil.

25,000 Republics Now Serve the Tonnage of American Commerce



Republic Model V—"The Thoroughbred"—Five-Ton—with the Republic capacity for excess strain. Long stroke motor. Armored Type Radiator. Internal Gear Drive. 168-inch wheelbase. Extra heavy pressed steel frame 9 inches deep. Nickel alloy springs, front 42x5 inches, rear underhung 54x5 inches. Four forward speeds. Chassis f. o. b. factory **\$4250**



Republic Dispatch—Maximum capacity 1500 pounds. In use in hundreds of lines. Furnished complete with express body, canopy top, side curtains, windshield, f. o. b. factory, **\$395**; or with beautiful solid panel body . . . **\$920**

CONSIDER the meaning of 25,000 Republic Trucks in daily use—in all branches of business. It is a tribute beyond challenge to the surpassing merits of Republic construction, the Republic-Torbenesen Internal Gear Drive, and the Republic low prices made possible by sixteen years of truck building experience, and our exceptional manufacturing facilities.

Seven Republic models provide all capacities for every purpose.

We furnish bodies for every need, including hoist, gravity, or elevating dump.

In more than 900 principal cities—in every state, and in foreign countries—Republic Dealers back these trucks with "The Strong Right Arm of Republic Service."



Republic Special, Full Three-Quarter Ton with Republic capacity for excess strain. This new model has a wheelbase of 128 inches, Republic Motor, Republic Armored Radiator, Republic-Torbenesen Internal Gear Drive, and solid, enduring truck material and workmanship. Chassis with seat, f. o. b. factory **\$395**



Model T, Three and One-Half Ton—The famous "Republic Dreadnaught," is engaged in all lines of heavy trucking service in every part of the United States. Its power and capacity are far in excess of the requirements of all ordinary loads of heavy trucking. Chassis f. o. b. factory **\$2750**



Model 10, One-Ton—This truck, one of the most popular of the Republics, is furnished complete at its low price, with stake or flare-board express body, seat, and bow top, f. o. b. factory **\$1195**



Model 11, One and One-Half Ton—The famous Republic "Big Middleweight." Widely adopted by shrewd truck users whose business is growing, and who buy trucks for the future as well as the present. All features of Republic strength and excess capacity. Chassis, f. o. b. factory **\$1450**



Model A, Two-Ton—So many exceptional records have been made by the Republic two-ton that a lion's share of credit falls to it in the fame of the Republic line. You get all the service that can be built in a two-ton size with Republic capacity for excess strain in Model A. Chassis, f. o. b. factory **\$1885**

Write for catalog of model you are interested in. Address Department AL

Republic Motor Truck Company, Inc., Alma, Michigan

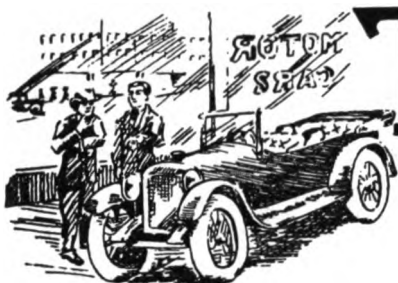
See your nearest Republic Dealer—Dealers and Service Stations in over 900 principal cities

REPUBLIC

INTERNAL GEAR DRIVE MOTOR TRUCKS.

Mention "Motor West." Please, When Writing to the Advertiser

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Trade Briefs and Factory Gossip

Chalmers Dealers to Stick.

Walter E. Flanders, president and general manager of the Chalmers Motor Co., discussing the recent Maxwell-Chalmers deal, says: "In the Chalmers organization there are some of the finest distributors and dealers in the business, and we are going to keep all of the good ones if we can. I thank the manner in which Maxwell dealers stick to us is pretty good evidence of the fact that we will be able to hold the Chalmers dealers' organization. There have been many rumors that we are going to drop the Chalmers cars and build trucks in the Chalmers plant. We may build some trucks, but long before we get trucks under way we will be producing Chalmers passenger cars at the rate of nearly 100 per day and continue this production to meet the dealers' requirements. The dealer situation is entirely in Mr. Toner's hands and I know he intends to hold both our Maxwell and Chalmers dealers right where they are now. Where we have a good Chalmers dealer he can rest assured that he will retain the Chalmers line and be able to make money out of it. We do not intend to make anything but a Chalmers car which will be as good in its price class as the Maxwell has proven to be in its class."

* * *

Redden Resigns to Market Tractor.

C. F. Redden, president and founder of the Redden Motor Truck Co., has sold his entire holdings and interests in the company and has resigned from the presidency in order to devote his entire time and attention to the development of a sales organization which will market a popular-priced farm tractor. It is claimed that Redden was the pioneer manufacturer of attachments for converting pleasure cars into trucks, having started in the business something over two years ago.

* * *

May Build Chalmers Trucks.

Refinancing plans for the Chalmers Motor Corp., New York City, and the five-year lease of its plant and assets to the Maxwell Motor Co., have been ratified by stockholders of the Chalmers company. In taking over the Chalmers plant the Maxwell Motor Co. will continue the manufacture of Chalmers cars. Also, the Maxwell will use its surplus space to manufacture Chalmers 3-ton trucks, providing the Maxwell fails to receive the expected government contract for four-wheel-drive trucks.

How Elgin Production Has Increased.

With a present factory output of 40 cars per day, the Elgin Corporation is producing more automobiles than any company in Illinois or Indiana, notwithstanding the fact that Indiana is the home of some of the oldest and best-known companies in the business. Indicative of the company's rapid growth is a comparison of the factory output of 724 cars for the entire season of 1916 and the single month of August, 1917, when 806 cars were produced, or more than were built during the entire season of 1916.



W. O. ALLEN,
President Turnbull Motor Truck Co., Defiance,
O., and Treasurer and General Manager
Allen Motor Co., Fostoria, O.

Harroun Begins Production.

The Harroun Motors Co., Wayne, Mich., has recently been delayed in its deliveries of Harroun cars by the bankruptcy of a castings company which was manufacturing castings for the Harroun and was holding the company's patterns. At a recent stockholders' meeting John Guy Monihan, president, announced that the company was not only solvent but could liquidate at once and return every dollar invested. After having resumed deliveries, the company shipped eighteen cars one week and more than thirty the next. It expects to turn out 2,400 cars the first year following a steadying in the prices of materials, and 50,000 the second year.

Hyatt Roller Completes Journey.

The famous Hyatt Roller Buick returned to Detroit recently from the Pacific Coast, closing what was more a circuit of the United States than a coast-to-coast trip. The Hyatt Roller carried a letter from Mayor Rolfe of San Francisco to Mayor Marx of Detroit. The car started its journey from Detroit, June 4, and traveled east. It visited Boston and New York and went as far south as Washington, then turned west to St. Louis, via Pittsburgh and Indianapolis. Crossing the great plains and climbing the Rockies it reached Salt Lake City and from there continued on to the Coast, journeying through the Tonopah gold region until further westward travel ended at Los Angeles. Turning north up the Coast the Hyatt Roller visited San Francisco and Seattle and swung eastward again from the latter city. The schedule was adhered to absolutely all along the way. The original set of Hyatt bearings, which were in the Buick the day it left the factory in 1909, are still in good condition.

* * *

Ross to Continue Eight Only.

H. D. W. Mackaye, general manager of the Ross Automobile Co., Detroit, announces the decision of his company to continue the manufacture only of its famous eight-cylinder model fitted with the Herschell-Spillman motor. There had been a report that the company would manufacture a six-cylinder car. Mr. Mackaye says that Eastern financial men are anticipating the removal of the plant from Detroit to an Eastern city.

* * *

Maxwell Earns \$5,507,647.

The Maxwell Motor Co., Inc., Detroit, made net earnings of \$5,507,697 during the fiscal year ended July 31, 1917. This amount, with the undivided surplus of \$5,510,775, gives a total corporate surplus of \$11,018,472. Regularly quarterly dividends of 1½ per cent have been paid on preferred stock, and four quarterly dividends of 2½ per cent each on common stock have been paid during the past fiscal year.

* * *

Shaler to Build Plant Additions.

The C. A. Shaler Co., Waupun, Wis., manufacturer of vulcanizing and tire repairing apparatus, has purchased adjoining land upon which to erect a new warehouse and shipping room. The company plans to build several other factory additions in the autumn.

AC

Spark Plugs

the Standard Spark Plug of AmericaSpecial for Ford Cars
A C CICO7/8" Regular for Maxwells
A C TITAN1/2" Regular for Willys-Overland
A C TITAN1/2" Regular for Studebakers
A C TITAN

AC Plugs have proven to be the best under all conditions. That is why 80 manufacturers of Automobiles, Trucks, Tractors and Aeroplanes use them for regular equipment. The leading race drivers are using them. Your motor will not give its best performance unless equipped with AC. You will come to them in time. Why not buy a set now and note the improvement?

CHAMPION IGNITION CO., Flint, Mich., U. S. A.

Abbott
Aerocar
Allen
American
Ames
Apperson
Atlas
Atterbury
Auburn
Badger
Bergdoll
Berkshire
Buick
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Carhart
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Case
Chalmers
Chevrolet
Chandler
Cole
Courier
Coreja

Crescent
Crow
Croxtan-Keeton
Cutting
Davis
De Tamble
Diamond
Dolsen

Flanders
Great Western
Glide
Grant
Halladay
Havers
Haynes
Henderson

Kissel
K-B-I-T
Lexington
Little
Louverne
McFarlan
Marathon
Marion

Nyberg
Oakland
Ohio
Omaha
Overland
Paige
Palmer-Singer
Parry

Sampson
Schacht
Selden
Signal
Speedwell
Staver
Stoddard-Dayton
Studebaker
Stutz
Sphinx
Standard
Suburban
Thomas-Detroit
Velle
Virginian
Warren
U. S. Truck
Vim
Walters
Westcott
Wichita
Whiting
Zimmerman

GEARS AND PARTS

Dorris
Elmore
Empire
Enger
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F-A-L
Federal
Firestone

Henry
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Hupmobile
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Interstate
Jackson
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Maxwell
Meteor
Michigan
Midland
Miller
Moon
Moline
Moyer

Partin-Palmer
Pathfinder
Penn
Paterson
Pilot
R-C-H
Regal
Republic

Above is a partial list of cars for which we carry transmission and rear axle parts. Gears for 150 makes and 650 models

WRITE FOR OUR CATALOGUE OF MONEY SAVING PRICES

1312 S. Hope St., Los Angeles
1461 Michigan Ave., Chicago

AUTO GEAR AND PARTS CO. 844 Eighth Ave., New York
291 Marietta Ave., Atlanta



Robert H. Solomons, Secy. Geo. C. Gordon, Pres.-Treas. Hal T. Boulden, Sales Dir.
MEN WHO ARE MAKING SELDEN CO. A FORCE IN MOTOR TRUCK WORLD.

Big Gains in General Motors Sales.

The General Motors Co. showed sales of 18,117 trucks and passenger cars during August, as compared with 11,717 in August, 1916, a gain of 54 per cent. These sales, which are not merely production figures, make a total of 217,000 motor vehicles for the year as compared with output of but 185,000 during the fiscal year ended July 31. August truck sales amounted to 1,069, compared with 235 in August of last year. The General Motors Truck Co. showed a gain in business amounting to almost 400 per cent. Every unit is surpassing last year's sales records. Buick car sales were first, with 10,874 for August, compared with 8,461 a year ago. Net profits of General Motors for the fiscal year closed July 31 were approximately \$30,000,000, against \$28,789,560 in the previous fiscal year. After allowing for a 6 per cent dividend on the \$20,000,000 preferred stock, 34 per cent was paid upon the outstanding common stock.

* * *

Grant Adds for Truck Manufacture.

The Grant Motor Corp., Cleveland, O., will build an addition to its factory which will cost \$750,000. Dimensions will be 875x60 feet and it will be four stories high. The increased space has been made necessary by the taking over of the Denneen Motor Co., manufacturer of Denmo trucks.

* * *

Westinghouse Declares Dividends.

The Westinghouse Electric & Mfg. Co., Pittsburgh, Pa., has declared quarterly dividends of 1¼ per cent upon both common and preferred stock. The dividend upon common is payable Oct. 31, and that on preferred on Oct. 15. Each dividend amounts to 87½ cents a share.

* * *

Carlisle Tire Starts Production.

The Carlisle Cord Tire Co., New York City, has started deliveries of its tires three months after the organization of the company. The company's plant is located at Andover, Mass., and production of Carlisle tires was commenced only after exhaustive tests had been made to develop the best model of tire.

Hudson Men Form New Company.

Announcement has just been made of the incorporation of Essex Motors, with an initial capitalization of \$500,000, all paid in; and with the following officers, W. J. McAneeny, president; R. B. Jackson, vice-president; A. Barit, treasurer; J. L. Vette, secretary. The board of directors includes, in addition to the above officers, R. D. Chapin, F. O. Bezner and O. H. McCornack. The announcement is of particular interest because of the fact that all of the officers and directors are at present associated with the Hudson Motor Car Co. The organization of Essex Motors will provide for the development of a car in a price field not competitive with Hudson. There is no connection whatever between Essex Motors and the Hudson Motor Car Company, however, aside from the fact that these stockholders and directors are interested in the Essex Motors as individuals.

* * *

New Jordan Price List.

The Jordan Motor Car Co., Cleveland, O., has put into effect a new price list on Jordan cars. The three open car models, embracing the seven-passenger touring, four-passenger sport model and two-passenger roadster, will all be sold at the price of \$1,995. The roadster and touring car were formerly listed at \$1,795 and the sport model at \$1,895. The sport limousine sells for \$3,300, the town car \$3,100, the brougham \$2,900, and the sedan \$2,650.

* * *

Coburn Joins Rankin Agency.

Andrew E. Coburn, former advertising manager of the Maxwell Motor Co., has joined the staff of the William H. Rankin Co., advertising and merchandising counselors of Chicago and New York. Coburn has been notably successful in writing and preparing the Maxwell advertising campaign.

* * *

Gargett, of Republic, Promoted.

Ford W. Gargett, formerly assistant sales manager of the Republic Truck Co., Alma, Mich., has been promoted to export sales manager and advertising manager.

Detroit Truck in New Factory.

The Detroit Truck Co., Detroit, Mich., has acquired a new factory containing 220,000 square feet of floor space and a production capacity of 28,500 truck attachments a year. The company is manufacturer of the Tonford converter for Ford cars. Officials of the company are Fred Patterson, president; H. A. Conlon, formerly field sales manager for the Federal Motor Truck Co., sales manager; E. A. Haskins, former Federal service manager, factory manager; D. F. Whittaker, former Federal advertising manager, is advertising manager for the Detroit Truck Co.; and H. E. Pierce, formerly Regal purchasing agent, is purchasing director for the Detroit Co.

* * *

Studebaker Sales Are Very Brisk.

The Studebaker Corp. of America has lately been benefited by increased sales of cars in the last two months. Mid-August sales totaled nearly 1,000. Since the opening of the present year the company has sold over 32,000 cars, as compared with about 45,000 sold in the same period of 1916. The comparative slump in sales is due to the uneasy conditions in the automobile industry lasting through May and June. Net profits for the six-months' period ended June were just under \$3,000,000, compared with \$8,611,245 in 1916. The company is now turning out nearly 1,000 cars a week.

* * *

Elgin Elected to N.A.C.C.

At a meeting of the National Automobile Chamber of Commerce, September 5, the Elgin Motor Car corporation, of Chicago, was elected to membership. The Elgin corporation has made great strides since its organization a little more than a year ago and is now shipping an average of 40 cars a day. New factory additions two and one-half blocks long are being rushed to completion and will be ready in their entirety within 90 days, thus enabling the company to more than double its present rate of production.

* * *

Automobile Repairmen to Organize.

Organization of approximately 3,500 men under 162 officers, including three majors, into three army units to repair motor and other transportation which the army will use in France and elsewhere, was recently ordered by the government. The men are probably intended for use back of European battle-fronts.

* * *

Amazon Installs New Laboratory.

The Amazon Rubber Co., Akron, O., has installed a new, complete and up-to-date chemical laboratory in its plant for the purpose of making exhaustive experiments in rubber along new lines, in addition to further perfecting, if possible, its line of tires and tubes. H. L. Arbogast, formerly assistant chemist of one of the large local factories, has been given charge of the department.

Some people have luck; others have Kelly-Springfields. The trouble with luck is that it isn't a thing you can count on.



Kelly-Springfield Tire Co.
Executive Offices
Seventh Ave. at 57th St., New York.
General Sales Department
1900 Euclid Ave., Cleveland, O.

LOS ANGELES SHOW NUMBER

of

Motor West

*WILL BE ISSUED
November 1st*

IT will be much larger and much more copiously illustrated than usual; printed on the same fine stock which has been consistently used in "Motor West" despite the constantly increasing cost; and distributed liberally all over the Pacific Coast, as befits the motoring authority of this section.

Advertisers desiring to take advantage of this opportunity to set forth the merits of their products to the Pacific Coast motoring community are urged to send in their copy early. Last advertising form goes to press October 31st; we can handle copy up to 3 P. M. on that day.



Motor West Publishing Co.

MARSH-STONG BUILDING
LOS ANGELES, CAL.

Willys Car to Meet Ford Price?

John N. Willys, rumor has it, will build a car selling under \$500 that will be a strong rival of the well-known low-priced masterpiece of Henry Ford. The exact price of the new car is unknown, but is reported to be very near the figure set for the Ford car. The car is rumored as being of an extreme simplicity and as weighing about 100 pounds less than the Ford, with fewer parts and all parts standard, making it easy to assemble in large quantities in the numerous large service plants of the Willys-Overland throughout the country. After many months of painstaking analysis and effort to bring the car to mechanical perfection, preparations are being made for a gigantic production which will be the strongest challenge ever offered to the Ford supremacy. The new car will differ from the Ford in being completely equipped with ignition, starting and lighting systems.

* * *

Facts Indicating Saxon Prosperity.

There are today 82,694 Saxon motor cars in service in all parts of the world. The average distribution of Saxons during the three and one-half years since shipments commenced has been 23,600 cars a year. Since the company was organized, it has earned its original capital thirteen times over. The high mark set in the past is being continued. The orders for Saxons are 1,000 cars ahead of the factory production at the present time.

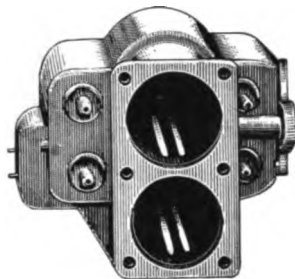
* * *

Maxwell Model to be Larger.

The Maxwell Motor Co., Detroit, Mich., will probably make no conspicuous mechanical changes in its line of models for the coming year. The chief innovation will be a longer wheel base of 109 inches, instead of 103 inches as in former models. Several improved closed bodies will be added to the line, among them a sedan, a berline limousine, a coupe which will sell at \$1,095, and a five-passenger touring car with all-year top selling at \$855. Both the five-passenger touring car and the roadster sell for \$745.

SCORED CYLINDERS

Repaired by a
NICKEL CAST IRON ALLOY
ELECTRICALLY WELDED
LIKE FILLING TEETH



NO

—HEATING
—WARPING
—BORING
—RE-GRINDING
—ENLARGING
OF BORE
—CHANGING
OF PISTONS
OR RINGS

Save
75
Per
Cent

All work guaranteed for life of Motor.
Welding and Brazing of all metals.

THE SCORED CYLINDER WORKS
433 Golden Gate Ave., San Francisco, Cal.
Phone, Market 8479

Duplex May Use Charlotte Plant.

H. M. Lee, president of the Duplex Truck Co., Lansing, Mich., is authority for the statement that it may be necessary for the company to operate the plant of the company at Charlotte should the business continue to increase as consistently as it has during the last three months. Since the Duplex company was reorganized and taken over by Lansing capital, the output has increased to 75 trucks a month.

* * *

Peerless Builds Trucks for Allies.

The Peerless Motor Car Co., Cleveland, O., is now producing 15 trucks per day for the Allies. Additions to the factory became necessary in order to maintain the schedule for passenger car production and a new warehouse has been erected, with dimensions of 400x48 feet.

Sunderman Tests Kerosene Carburetor

Captain F. A. Sunderman, of the Sunderman Carburetor Corporation has recently returned from a trip of more than 3,000 miles in a car fitted with the kerosene vaporizer recently invented by himself. He experienced no difficulty in convincing the experts of the Patent Office that his carburetor was of such a distinctive and radical character that it infringed on no patents known. Mr. Sunderman, using kerosene bought at grocery stores en route, averaged 19.28 miles to the gallon.

* * *

Doble Co. Locates First Plant.

With orders booked for Doble-Detroit steam cars to the amount of over \$18,000,000, the Doble-Detroit Steam Motors Co. has announced the location of its first plant, in Detroit. This building, which has been leased for a period of five years, is three stories and basement, with the possibility of adding another story. The present floor space is 52,000 square feet. The plant will be used entirely for assembly, as the engines and boilers for the company will be made elsewhere, probably by the Jacobson Machine Co., of Warren, Pa. The General Engineering Co. and the Doble-Detroit Steam Motors Co. will continue their joint offices at 808 Marquette building, Detroit. In the factory just completed there is a capacity, according to President C. L. Lewis, for 2,500 cars, although it is not the plan of the concern in the first year to go to the limit of the capacity.

* * *

Conveyor System at Inter-State Plant

Inter-State cars are now built along the latest progressive lines. The recent installation of a conveyor system from the chassis paint through the final assembly has made it possible to adequately take care of the demand for Inter-State cars which has increased over 50 per cent in the past 60 days. A new compressed-air, chassis-painting machine has also been in operation at the Muncie (Ind.) plant for some time. By this device as many chassis can be painted in one day as it would ordinarily take a dozen men to finish.

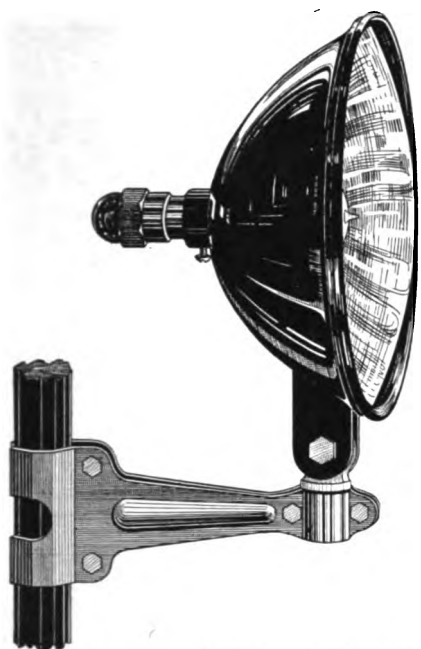
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Rowe Calk Absorbs Diamond Chain.

The Rowe Calk Co., of Plantsville, Conn., has acquired by purchase the Diamond Chain Co. of York, Pa. The Rowe Calk Co. manufactures the widely-known Prest-O-Grip Anti-Skid Chains for trucks with solid tires. Prest-O-Grips, after three years of experimenting and of merchandising in a small way, were perfected and given to the motor truck market a year ago. After a while the Rowe Calk Co. found it necessary to greatly increase the Prest-O-Grip manufacturing facilities, and the business has now expanded to a point where it has become necessary for the Rowe Calk Co. to have some certain supply of chain to protect the dealer and consumer.



SIX STUTZ AMBULANCES PRESENTED TO THE UNITED STATES GOVERNMENT BY STUTZ MOTOR CAR CO. AND PARRY MFG. CO., INDIANAPOLIS.



NITE-PILOT

—a high-grade searchlight, designed along scientific lines, is now ready for distribution. It will retail at

\$7.00

NITE-PILOT

- has a complete swing horizontally, and a vertical movement of 225°, permitting night inspection of the motor and lighting inside of car.
- detached from the support, it may be used as a trouble lamp or for camping, etc.

Attractive discounts to dealer and jobber.

HUGHSON & MERTON, Inc.

Pacific Coast Distributors.

Los Angeles, San Francisco, Portland and Seattle.

MANUFACTURED BY

WILLIAMS MFG. CO., 310 N. Flower St., SANTA ANA, CAL.

M^T. LOWE

\$1⁵⁰ FROM LOS ANGELES
 (\$1.25 FROM PASADENA)
EVERY DAY OCTOBER 20th
TO DECEMBER 3rd INCLUSIVE

—RETURN LIMIT, SEVEN DAYS—

Tickets from Agents only—Conductors do not sell them

MILE HIGH TENNIS TOURNAMENT

OCTOBER 20th and 21st

MAY SUTTON BUNDY, THOS. C. BUNDY,
MAURICE McLAUGHLIN, SIMPSON SINSA-
BAUGH. OTHER TENNIS STARS.

PERFECT AUTUMN WEATHER
ABOVE THE FOGS OF THE VALLEY

Mt. LOWE RESORT

Ye Alpine Tavern and Cottages offer every comfort
at Moderate Prices.

PACIFIC ELECTRIC RAILWAY

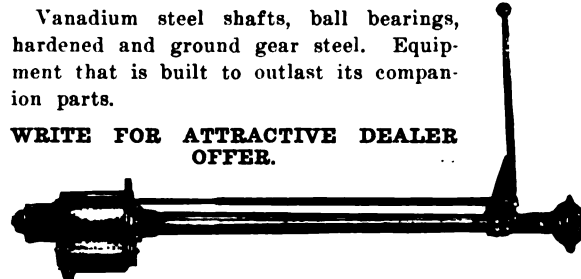
Starting on a Grade

CRUMP'S FORD TRANSMISSION
 —AUXILIARY—

Ford trucks with only Ford two-speed control are inefficient. Crump's auxiliary adds, with shift lever control, a **powerful low**, slower than the Ford low, to start easily on any grade; an intermediate and a positive neutral. These three added points give the Ford truck the flexible power range essential to efficiency. Underdrive for trucks and overdrive for pleasure car. "Gears-in-mesh" make easy shifting, no stripping and quiet running. Positive neutral makes **easy cranking**.

Vanadium steel shafts, ball bearings, hardened and ground gear steel. Equipment that is built to outlast its companion parts.

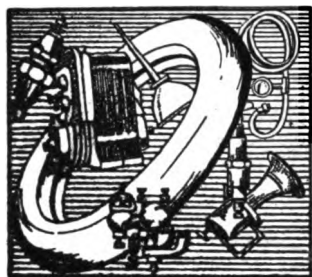
WRITE FOR ATTRACTIVE DEALER OFFER.



Sole Manufacturers and Distributors

L & B TRUCK MANUFACTURING CO.

1416 S. LOS ANGELES ST.,
LOS ANGELES, CAL.



New Things in the Accessories Field

METAL SPECIALTIES AWARDED BLUE RIBBON AT FORD SHOW.

The Metal Specialties Co., manufacturers of the Presto line of accessories, was the winner of the blue ribbon, the highest award at the National Exposition for Ford Accessories, for the "most complete and easily understood exhibit." The articles that were closely related to each other were displayed upon the same panel. The cigar lighters and the inspection lamps were exhibited together. The dash lamps and cowl lamps were shown in a careful and pleasing design. The electric engine, radiator and carburetor heater was given a panel to itself and displayed upon the counter; the Alweather Protector and Tire Tool were given places of prominence by themselves.

WHIRLING FLAGS PROOF AGAINST WEATHER WEAR.

Whirling Flags is the latest response to the demand of the motorist for neatness and trimness in the patriotic emblems he carries on his car attached usually to the radiator cap in this strenuous period of war. Silk and canvas flags quickly become frayed, torn or weather-worn. Whirling Flags, is of metal and revolves in the manner of a pin-wheel. It may be attached to the radiator cap in a minute and comes complete with a small attachment. Sales are handled by the Prismolite Co., Columbus, O.

DRAVER WHEEL AND TIRE CARRIER.

For its first purpose the protection of the spare wheel or tire carried on the rear of the car from thieves. A hardly less important fact is that it keeps out rain, snow, sun or dust, almost as great enemies to exposed tires as actual hard service. It can carry a wheel without a tire, with the hub clamped between the end plates and the space between closed with a flexi-



CARLISLE CORD TIRE.

First photograph obtained of the Carlisle Cord Tire in service. Manufacture of this new tire, which is noteworthy for the extreme strength and size of the cords used in its carcass, is under way at the factory in Andover, Mass. The officials of the company state that production will be increased in volume rapidly.

ble cover to protect the whole or a demountable rim without a tire, or the tire itself, clamped between the end plates. Even two wheels or a like number of tires can be carried. The exposed tire carried on the rear of a car is a slightly detail—the Draver Wheel and Tire Carrier gives all cars a neat, finished appearance. The turn of a key and throw of a hand lever releases the wheel, tire and tools, ready for instant service. The Draver Wheel and Tire Carrier is manufactured by the E. R. Draver Mfg. Co., Richmond, Ind.

NOGLAIRE LENS PASSED UNDER RIGID TESTS.

The Noglaire Automobile Lens is manufactured by the Noglaire Auto Lens Co., Portland, Ore. Rigid official police tests in San Francisco, Seattle, Portland and other cities have given this lens a perfect rating. The chief feature claimed for the Noglaire lens is a complete absence of any trace of glare or dazzle to blind the eyes of the drivers of approaching cars. This highly desirable condition results from the two styles of glass of which the lens is composed—the upper part being formed of clear prisms glass, and the lower part of sanded glass. The reflector throws the beam downward through the clear prisms portion of the lens, casting a fine light upon the road for a distance of from 500 to 600 feet while the beam thrown upward by the reflector, passing through the sanded glass at a height of 40 inches, where it meets the eyes of approaching drivers, is soft and diffused. As to side light, this is given by the clear prisms upper portion of the lens, which gathers the light together in a broad, flat, rectangular beam, which is held absolutely controlled at a height of 40 inches, lighting up both sides of the road with its full beam. The retail price of Noglaire lenses ranges from \$3 to \$4 per pair.

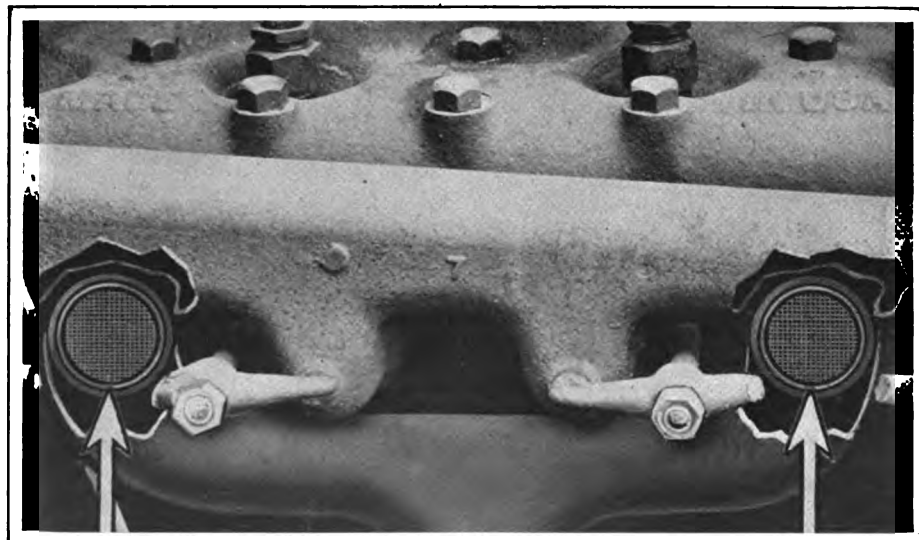
NEW IDEA IN GAS SAVERS.

What is said to be one of the most practical and efficient gas savers ever placed on the market has just been perfected and offered to the public by the Consolidated Motors Co., at Detroit. This new appliance is called the GasK-Hot—it taking the place of the gasket at the connection of the manifold with the cylinder, and because its action is due to the heat. The small screen is kept at an intense heat from the combustion in the cylinders and this heat vaporizes absolutely every particle of the gasoline before it reaches the cylinders. It will also vaporize any kerosene that may be in the gasoline—and by virtue of preventing any unvaporized gasoline from getting into the lubricating oil within the cylinders, it reduces carbon troubles to a minimum. In careful tests on cars in almost every state in the Union the GasK-Hot has shown an economy of from 25 to 40 per cent of the gasoline.

The principle of the GasK-Hot is radically different from other gas savers in that the attachment is made at the cylinder connection instead of down at the carburetor, where there is no heat. The ordinary carburetor attachment simply breaks up the gasoline with a screen, and not with heat which is really necessary to insure absolute vaporization under all conditions of weather and qualities of gasoline.

LOS ANGELES SHOW NUMBER.

The next (November 1st) issue of "Motor West" will be the annual Los Angeles Show Number, much larger and much more widely distributed than usual.



GASK-HOT, A NEW GAS SAVER, AND HOW IT IS ATTACHED.

"The Light that Shows the Road"

S & M

The Spot-Lite

That *Can't* break the Law!

There's an immense selling advantage to dealers in the S & M because of its being the one spot-light provided with an absolute guard against law infraction — when adjusted it *cannot* be elevated in the manner the law forbids. The S & M regulating device does this and is an *exclusive* feature.

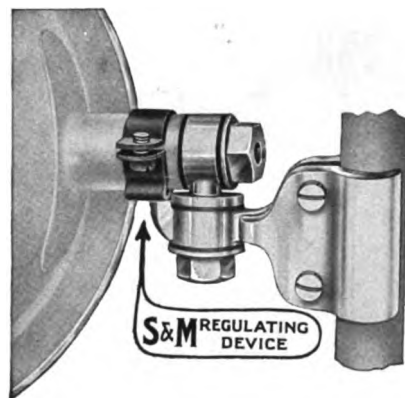
Besides, S & M were the pioneers and have from the first been leaders in the spot-light field. S & M are standard factory equipment for the Stutz and other high grade cars. Compare their double-shell construction, baked enamel finish, extra heavy silvering, beauty and workmanship with any other lamp on the market and see why the S & M stands first.

S & M Spot-lites \$7.00 to \$10.50. With Periscope Mirror \$1.00 extra.
S & M Regulating Device separately (for attaching to S & M models now in use) \$1.50.

S & M LAMP CO.

Pioneer Makers of Spot-lights

117 West 36th Place Los Angeles, Cal.



For Motor Truck Upholstery



TRUCK SPECIAL

Satisfactorily meets the scarcity-of-leather situation. Costs less than even the poorest split leather but wears better.

Comes in 60-yard rolls, 50 inches wide. Cuts in multiples without waste.

You should use it to save money.

You should use it to save leather.

It is waterproof, washable—and its fine leather appearance and "feel" leave nothing to be desired.



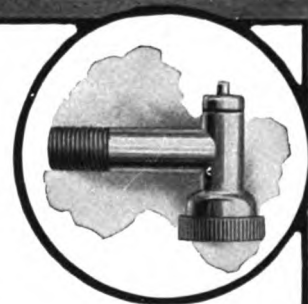
Write for Truck Special Booklet,
Samples and Prices

Du Pont Fabrikoid Co.
WILMINGTON, DEL.

Works at Newburgh, N. Y. and
Fairfield, Conn.
Canadian Office and Factory:
Toronto

*World's Largest Makers of
Leather Substitutes*

YOU CAN'T TELL
HOW MUCH BENGAL
TIGER THERE IS IN
A WHITE RABBIT
UNTIL YOU PUT HIM
ON A MEAT DIET.



—and you can't tell how many miles your tires can give until you put them on a **REGULATED, MEASURED** air diet.

Just so many pounds pressure, no more and no less.

If you pumped up your tires every time they fell below the pressure specified by the tire-maker, they would last for the maximum distance.

Don't say pumping is too much trouble. With a

SCHRADER UNIVERSAL PUMP CONNECTION

it is no trouble at all.

Ask your dealer to show you how it works.

Price Thirty-five cents.

A. SCHRADER'S SONS, Inc.
783-803 Atlantic Ave.,
Brooklyn New York



Stromberg

Carburetors

*The Accepted
Standard*

Motorists who are not getting maximum mileage, power, acceleration and flexibility — are paying for a Stromberg Carburetor whether they own one or not.

Ask your dealer to put one on your car with a guarantee of "satisfaction or money-back."

*We are also Wholesale Distributors for
LEE TIRES and TUBES, HARRIS OILS, WHITE
STAR MOTOR OILS, RAYBESTOS BRAKE
LINING, U. S. BALL BEARINGS, Etc.*

CHANSOR & LYON CO.

(Wholesale Only)

12TH AND GRAND AVE., LOS ANGELES

Stores also in San Francisco
Oakland, Fresno, Portland
Seattle, Tacoma & Spokane

STEER RELIEF MAKES A FORD DRIVE EASIER.

The International Sav-a-Life Fender Co., 539 Guardian Bldg., Cleveland, O., has perfected an attachment which overcomes the vibration and see-saw action of the Ford steering wheel. The illustration shows it properly attached to the front axle and spindle rod of a Ford, with an enlarged view of the device itself.

Steer Relief, as this accessory is called, is adjustable to the peculiar action of the Ford steering gear. It works with it to cut out see-saw action and vibration without hindering control. Weather and road conditions do not clog it, as all vital work-

ing parts are enclosed in separate chamber.

Tests have proven Steer Relief to be strongest in the straight-ahead course, in which position the tension is greatest. The greater the turn the more the tension diminishes, but its steadying force continues to keep the car under absolute control, no matter how short and sharp the turn may be.

Steer Relief gives the driver great relief from fatigue, because the tense grip he otherwise exerts on the wheel is not necessary when it is used. The company's present capacity is taxed to supply the demand.

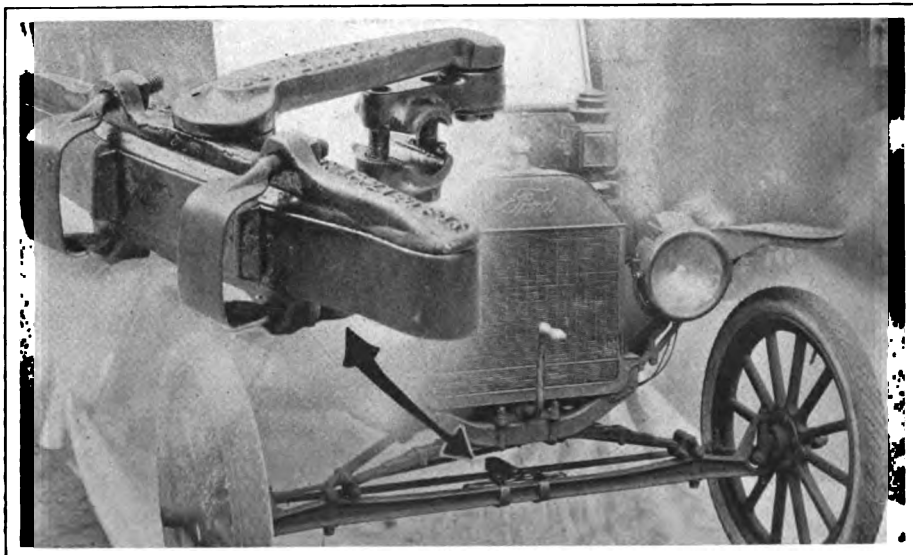
WHEN THE NIGHTS GET COLD.

In the mountain sections of "Motor West" territory such low temperatures prevail at times that there is a great risk of frozen radiators and burst pipes, and great difficulty in starting the motor unless some adequate heating device is used.

The Presto Electric Heater, which is manufactured by the Metal Specialties Mfg. Co., 730-736 West Monroe Street, Chicago, Ill., is designed to afford protection in such emergencies. It is built up in oval shape, with twin heating elements extending the full length of the heater, about 6½ inches. The construction throughout is fireproof and practically indestructible. It is 3½ inches wide by 1½ inches thick, covered with heavy perforated metal, black japanned to prevent it from rusting, with nickel-plated ends.

Ten feet of asbestos covered lamp cord is furnished with each heater, with regular screw plug attached to fit ordinary house or garage lighting sockets. All the user has to do is to screw the plug into the nearest light socket, put the heater under the hood, close to the carburetor or radiator; throw a blanket over the radiator so as to confine heat where most needed and go to bed assured of the fact that when he goes to the garage in the morning he will find the engine warm and starting a pleasure.

It gives a strong uniform heat, at once eliminating the difficulty of starting the engine, no matter how cold it is. The heating elements never become hot enough to ignite any gases, oil or grease. It is a labor-saving device, when the engine is hard to start, and saves the heavy drain on the battery when an electric starter is used. The cost of operation is nominal, cheaper than the repairman's bill or heating the whole garage, and answers the same purpose.



STEER RELIEF, FOR MAKING A FORD DRIVE EASIER. ATTACHED AND IN DETAIL.

Mention "Motor West." Please, When Writing to the Advertiser

DUPLEX

4-WHEEL DRIVE TRUCKS.

The Duplex has the strength, the irresistible power and endurance to perform efficiently the most severe haulage tasks. It is a durable, all-year-round motor truck, and has the stability that insures long life.

With increased production, our dealer organization is being enlarged. Wire or write for complete information. Address all communications to Dept. 102.

DUPLEX TRUCK CO.
LANSING, MICH.



SATISFACTION

Specify Bosch Magneto Ignition for your engine. You will enjoy the satisfactory confidence that your ignition system is reliable, amply efficient, and troubleproof. You can't be satisfied with ignition less reliable than

BOSCH

MAGNETO IGNITION

Bosch Magneto Co. - - New York

Coast Branch: 1324 Van Ness Ave., San Francisco

Coast Distributors: E. A. Featherstone, Los Angeles
Ballou & Wright, Portland and Seattle
Kimball-Upson Co., Sacramento

DENBY

MOTOR TRUCKS

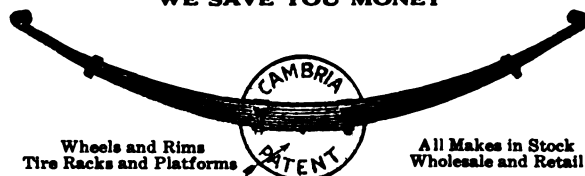
Pioneers of the internal-gear drive

DENBY TRUCKS ARE SOLVING THE HARDEST HAULAGE PROBLEMS THE WORLD OVER

DENBY MOTOR TRUCK COMPANY
DEPT. H. Detroit, Michigan

Main 1076 **CAMBRIA SPRING CO.** F 5233

Incorporated
"WE SAVE YOU MONEY"



AUTO AND TRUCK SPRINGS

Demountable Rims Sold and Applied
Spring Steel Bumpers

SPRINGS REPAIRED, FORGINGS AND FRAMES STRAIGHTENED
Factory: 913-921 So. Santee St., Los Angeles, Cal.
Office: 916-918 So. Los Angeles Street

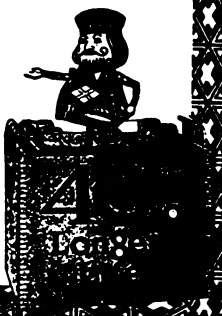
PHILADELPHIA

DIAMOND GRID BATTERY

The Best of Batteries

There may still be an opportunity to obtain selling rights in your territory if you act quickly.

Philadelphia Storage Battery Co.
Pacific Coast Branch:
1105-7-9 West Pico Street,
Los Angeles, Cal.



A P E X

Motor Oils

THE HIGHEST POINT OF EFFICIENCY

Gasoline "with the Punch"

PUENTE OIL CO.

Oldest Refiners and Producers on the Coast

DRIDEK

**Makes a
Remarkable
Auto Top!**

It is the result of a perfect manufacturing organization, with ample capital, and a great deal of experience.

Many of the best cars are equipped with



because of its handsome appearance---its soft, pliable finish; and because it will stand up under the hardest kind of service.

**Send for
samples
and prices**

L. J. MUTTY CO.
BOSTON, MASS.

SCOVEL IRON STORE CO.
Pacific Coast Agents
SAN FRANCISCO, CALIF.



Los Angeles, Cal.—The Delion Tire & Rubber Co., western branch has been incorporated for \$50,000 by A. L. Bartlett, J. W. Luther and J. E. Geyer.—The Master Carburetor Co., capital stock \$300,000, subscribed \$500, has been incorporated by Charles G. Harness, D. F. Poyer, E. M. Chandler, George Beebe and J. C. Crouch.—The Damon Specialty Co., manufacturer of Nonolio polish, will erect a concrete and steel building, to cost \$35,000, upon one of two sites now under consideration.

* * *

Baker, Ore.—Southard & Shinn will erect new garage quarters costing \$10,500.

* * *

Dalles, Ore.—The Dalles Garage Co., Inc., will have a garage 120x68 feet and costing \$25,000 built for it.

* * *

Portland, Ore.—The Mitchell, Lewis & Staver Co., Mitchell car dealers, have opened a retail salesroom in the Beck building.

* * *

Stockton, Cal.—L. J. Kitt of the Electric Garage has taken the agency for the Detroit Electric and is building two-story quarters, 50x50 feet.—F. D. Naylor, Ford distributor, will erect a new garage 100x300 feet.

* * *

Bakersfield, Cal.—Charles Whitaker has become Jackson car dealer for Kern county.

* * *

Woodland, Cal.—W. T. Criteser has taken the Elgin car agency for Yolo county.

* * *

Pasadena, Cal.—H. L. Wood has been appointed manager of the Western Auto Electric Co.—The Lake Ave. Garage, King, Empire and Dort car dealer, has changed its name to Miller & Price, following its move to new quarters at 89 N. Marengo Ave.

* * *

Hayward, Cal.—C. L. Barnum has purchased the half interest of Harry Scoville in the Hayward Garage.

* * *

San Diego, Cal.—The Lord Motor Car Co., Maxwell and Velie distributors, has moved to new quarters at Broadway and State St.

* * *

San Jose, Cal.—C. H. Northrup & Son has taken the agency for Davis cars and Rush trucks in the Santa Clara Valley section.—Granger & De Hart have sold out their business to Latham, Davis & Co., Inc., San Francisco.

* * *

Oakland, Cal.—Charles H. Burman, new Oldsmobile distributor for the trans-bay region, has occupied quarters at 3074 Broadway.

* * *

Redlands, Cal.—Bert S. Hatfield, Buick dealer, has added the Maxwell agency.

* * *

Fortuna, Cal.—R. C. Look has bought the interest of his partner, A. E. Simmons, in the Eel River Garage.

* * *

Auburn, Cal.—W. L. Clark has bought the Ford agency from Prewett & Hallbom.

* * *

Healdsburg, Cal.—R. W. Patteson has taken the Buick agency.

* * *

Colusa, Cal.—H. H. Hicok & Son have taken the Reo agency.

* * *

San Pedro, Cal.—Thorley J. Lord will act as general manager of the City Garage.

Elgin Six

"The Car of the Hour"

Big, Beautiful, Impressive, Powerful, Dependable,
Economical

"Built Like a Watch"

4-Passenger Roadster **\$1095**
5-Passenger Touring Car

Subject to Change Without Notice
Write for descriptive catalogues

Elgin Motor Car Corporation CHICAGO U. S. A.



PHONE:
Main 4062



PHONE:
A-4062

AUTO AND TRUCK
SPRINGS

WHEELS, BUMPERS
FORGINGS

Wholesale

Retail

UNITED STATES SPRING CO., Inc.

Successors to A. & F. SPRING CO.,
1120-22 South Los Angeles Street, LOS ANGELES.

HARROUN

A car of popular price, designed
by Ray Harroun, in which a new
type of four-cylinder motor develops
revolutionary power and efficiency.

Harroun Motors Corporation

General Offices, Detroit

Plants, Wayne, Mich

Quality in Motor Trucks

It has been our endeavor to create a commercial vehicle
that would excel first of all in the quality of the material
used, and second, in the economy of its operation. :: ::
Our reputation for producing the most lasting truck is
recognized by our many users. :: :: :: :: :: :: :: ::

We offer for your convenience, the following sizes:
1½ Ton 2 Ton 3½ Ton 5 Ton 7 Ton

HURLBURT MOTOR TRUCK COMPANY
133d St. and Harlem River :: New York, N. Y.

Acason
THE OWNER FIRST
TRUCKS

This company has an attractive proposition to
offer desirable distributors and dealers in Pacific
Coast territory.

1½-ton Truck ..	\$2100.00	3½-ton Truck ..	\$3000.00
2-ton Truck	2400.00	5-ton Truck	4200.00
Light Tractor			\$2500.00
Heavy Duty Tractor			3800.00

ACASON MOTOR TRUCK COMPANY
DETROIT




INTER-STATE
"The Extra Value Car"

\$850 to \$950
F. O. B. Factory

"A Message from Owners"
Yours for the Asking

WRIGHT MOTOR CAR CO.
1001 SOUTH HOPE STREET
Distributors California and Arizona

A-5772 Main 627

ADAMSON VULCANIZERS

Made in All Sizes, from Small 5-Minute
Vulcanizer up to Larger Models
for Garage use.

ADAMSON MFG. CO., East Palestine, Ohio

"Results Are Better"

Mitchell

—Mitchell Motor and Service Co., Seattle—
"results are better and cost of operation considerably lower while using Zerolene."

Buick

—J. D. Lauppe, Sacramento—"have found Zerolene to be a satisfactory lubricant for Buick automobiles."

Dodge

—H. O. Harrison Co., San Francisco—"gives perfect satisfaction."

Maxwell

—Cuyler Lee, Oakland—"Zerolene has given us perfect satisfaction."

ZEROLENE

The Standard Oil for Motor Cars

Endorsed by Leading Car Distributors.

—because the records of their service departments show that Zerolene, correctly refined from California asphalt-base crude, gives perfect lubrication—less wear, more power, least carbon deposit.

Dealers everywhere and at our
service stations.

Standard Oil Company
(California)

Seattle, Wash.—James A. Smith has opened a sales agency at 518 Olive St. for the Gates half-sole tire.—The Electric Vehicle Co. has been incorporated for \$5,000 by O. L. Willett and M. M. Preber.—The Watermobile Corp. of America has been incorporated for \$25,000 by W. L. Dudley, William Lisle Dudley and E. J. Rathbone.—The White Co. has enlarged its territory to include British Columbia.

* * *

Wenatchee, Wash.—Seaman & Francis has taken the agency for Oldsmobile cars and Federal trucks.

* * *

Pomeroy, Wash.—Herbert Kimble has taken the Saxon agency.

* * *

Spokane, Wash.—The Farnham Bros. Motor Car Co. has taken the agency for Miller tires.

* * *

Deer Park, Wash.—The Kimmel-Sharkey Motor Co. has been organized for \$10,000 by J. B. Sharkey and O. M. Kimmel to take over and operate the Kimmel Garage.

* * *

Deseret, Utah—The Deseret Garage Co., capital \$10,000, has been incorporated by Job Dewsnap, W. N. Nations, Fred Dewsnap, C. Dewsnap and Henry Dewsnap.

* * *

Salt Lake City, Utah—The Sun Motor Sales Co., new Maxwell distributor for this territory, has established temporary quarters with the Federspiel Motor Car Co., 445 S. Main St., until the erection of its new two-story brick home on Fourth South St. is completed

* * *

Lewiston, Ida.—H. E. Oechsli and Fred M. Ferrell has purchased the Ford agency from E. H. Roehl, the new concern to be known as the Fergus Motor Co.

* * *

Albuquerque, N. M.—The Cannonball Motor Co., incorporated for \$10,000,000, paid up \$25,000, has been formed by C. A. Robertson, B. B. Hanlin, D. A. Randall and J. C. Milne, to have headquarters in Texico and engage in the manufacture of automobiles and supplies.

* * *

Phoenix, Ariz.—R. D. Roper has taken over the Chalmers car agency.

* * *

Tacoma, Wash.—A. F. Douglas has been appointed manager of the truck department of Little & Kennedy, Studebaker car and Federal truck dealers.—The Sunset Motor Co., Cadillac and Hupmobile dealer, has leased quarters at 741-43 Broadway and 742-44 Commerce St.—Edward P. Leonard, authorized Ford agent, will have a garage built for him at 5617 S. Union Ave., costing \$10,000.—The Paige and Saxon Garage has been opened at 1201 A St. by J. B. Schabek.—Davis-Dunn, Inc., has been incorporated for \$10,000 by George Davis, George L. Dunn, R. A. Mueller and L. W. Harkins.

* * *

San Bernardino, Cal.—Waldo Throop has opened a branch here for the Oldsmobile Co. of California.

* * *

San Francisco, Cal.—The Goodrich Rubber Co. has leased store quarters at Golden Gate and Van Ness Aves.

* * *

Pomona, Cal.—Leslie Elliott has taken the Racine tire agency for Pomona, Chino, Claremont and La Verne.

* * *

Fillmore, Cal.—C. C. Elkins has taken the Willard storage battery service station.

* * *

Ontario, Cal.—Batchelder & McKeon have taken the Chevrolet agency for the western part of San Bernardino county.

* * *

Tracy, Cal.—The Tracy Auto Electric Co. has opened a Willard battery service station.

* * *

Oxnard, Cal.—Paul and Miles Hutchinson have taken the Willys-Overland agency for Ventura county.

"Brains In the Rear Axle"

BAILEY

Non-Stall
DIFFERENTIAL

Bailey Non-Stall Differential Corp.

1124 Michigan Avenue

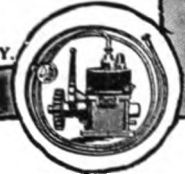
Chicago, Ill.

KELLOGG
Engine Driven
Tire Pump

"NO OIL SPRAY WITH AIR"—Guaranteed
"ALL METAL CONSTRUCTION"—Everlasting
Installation Fittings for Practically
All Makes and Models of Cars.

Send for Literature.

KELLOGG MFG. CO., ROCHESTER, N. Y.



DEALERS MAKE MONEY!

Get the Agency for the "Tonford" truck unit,—one of the quickest selling propositions you ever tackled. Attached to a Ford chassis, makes a one-ton truck. Light, strong, economical, easily handled. Dry goods merchants, furniture dealers, retailers in almost every line, bottlers, farmers, creameries, all want it. Find it best possible buy.

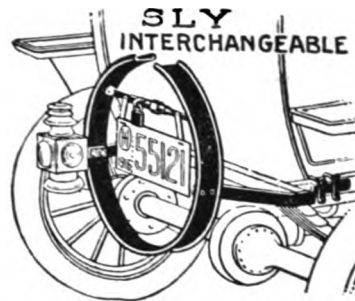
\$325 Tonford \$325

TRADE MARK

All the facts that sell the Ford, sell the Tonford. Highest grade truck attachment made,—easiest to attach,—strongest, most durable. Best constructed truck unit on market,—lowest priced. Get busy now, while territory is still open. Write today. Learn how "Tonford" dealers pile up profits.

DETROIT TRUCK CO., Mfgs., Detroit

BE UP-TO-DATE ON TIRE CARRIERS



The strap kinds are obsolete and unsightly. The SLY interchangeable—Ford or Chevrolet quickly—neatly does the trick—take any casing or demountable—cost no more. Beware of imitations. If your Jobber doesn't list, write us for complete catalogue—of real Carriers and "Better Springs."

NEW ERA SPRING & SPECIALTY CO.

890 Woodward Avenue,
Detroit, Mich.

Save the Nation's Gasoline with the

SUNDERMAN \$6

Vacuum Carburetor

This price maintains on Ford and Metz models. Other cars \$8 and \$10, depending on fittings necessary. This perfect carburetor will save you, no matter what your car, from 30 to 50% in your gasoline consumption. At the same time it will give your motor power, speed and flexibility beyond your fondest hopes.

It's your duty to your country to save gasoline when you can. It's a dealer's duty to promote the sale of an instrument that will cheapen the cost of running a car.

Send in your orders now—Fall is a big carburetor season

SUNDERMAN CORPORATION

17 Chambers Street (Dept. C) NEWBURGH, N. Y.
Western Office: 408 Kresge Bldg., Detroit.

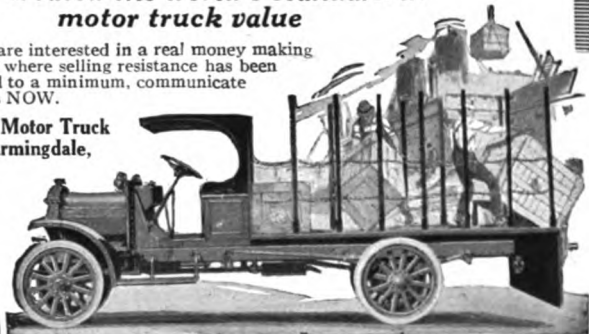
THE FULTON TRUCK

1½ Ton Capacity

Has created the world's standard in motor truck value

If you are interested in a real money making agency where selling resistance has been reduced to a minimum, communicate with us NOW.

Fulton Motor Truck
Co., Farmingdale,
L. I.,
N. Y.



RIVES AUTO PEDAL

Neverslip Pads \$1 per Set

— INCLUSIVE —

Cover the entire Field—Rubber Vulcanized through and locked securely to the metal.
Geo. H. Rives Mfg. Co., Inc. 2167 Westworth Bldg., New York



PRESSED STEEL PARTS FOR AUTOMOBILES AND TRUCKS

ESTIMATES CHEERFULLY FURNISHED

The Bossert Corporation

UTICA
NEW YORK

FISK

TIRES

Non-Skid on All Roads in All Seasons

IT'S the tread! The rains of autumn are just ahead and the snows of winter are not far off—the period of the year when your safety and peace of mind must be assured by tires that *actually* prevent side slipping.

Fisk Non-Skid Tires give this surety on all roads. They hold fast on hard, wet, slippery surfaces, and take a firm grip for the pull ahead on softer roadbeds. They are the ideal all-year-round tire.

Examine this illustration

The basic principle of Fisk Non-Skid protection is perfectly simple. When you understand it you will realize why Fisk Non-Skid Tires are the only auto tires that furnish such complete protection.

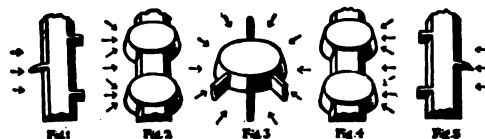


Fig. 1 is the outside rib that makes an uninterrupted counter against direct side slipping or skidding—**Fig. 5** is the same protection on the other side of the tread.

Fig. 2 is the outside row of buttons, connected by a second rib of solid rubber. The buttons, which are slightly higher than the connecting rib, offer perfect resistance against skidding and, because they grip the road so firmly, make the pull forward in soft ground

ever so much more positive and certain—**Fig. 4** has these identical qualities, but from the opposite direction.

Fig. 3 is the master button around which the Fisk Non-Skid tread is constructed. It supplies resistance against slipping in any direction—no matter which way there is a tendency to skid there is always a flat resisting surface to prevent that skidding and to assist the sure forward movement of the wheel.

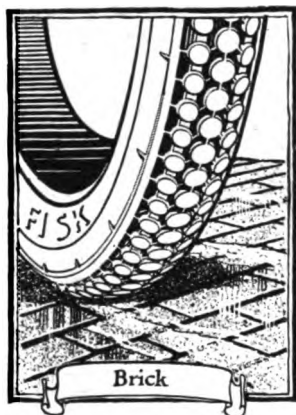
When you buy a Fisk Non-Skid you are getting more than temporary anti-skid protection. The buttons wear—they preserve the non-skid character of the tire through month after month of usage.

There is an extraordinary amount of mileage in the buttons alone, and throughout their entire long life you have the perfect protection which makes Fisk the safest non-skid tire you can buy.

The Company behind the tire, its ability and eagerness to make the best product it knows how to build, the Fisk policy of insisting that users shall have full satisfaction and the product itself which embodies and justifies the policy—these explain why Fisk is the best dollar-for-dollar tire value now for the motorist.

For Sale by Dealers Everywhere

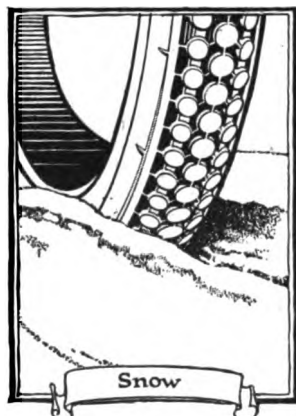
and by 130 direct Fisk Branches in principal cities. Wholesale distributors in Texas, The Fisk Company of Texas—Houston, San Antonio and Dallas. In Canada, James Walker Hardware Co., Montreal; Breen Motor Co., Ltd., Winnipeg; Fisk Tire Agency, Calgary; John Millen & Son, Ltd., Vancouver; and Dominion Automobile Company, Ltd., Toronto. In Porto Rico, The Fisk Tire Store, San Juan. In Hawaii, E. O. Hall & Son, Honolulu. In the Philippines, Yangco, Rosenstock & Co., Inc., Manila. In Cuba, Cuba Importation Company, Havana.



Brick



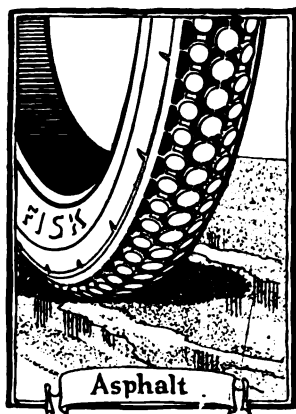
Macadam



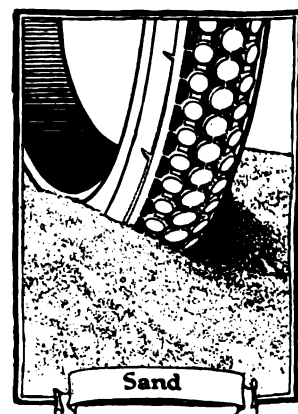
Snow



Mud



Asphalt



Sand



MOTOR West

THE MOTORING AUTHORITY OF THE PACIFIC COAST

VOL. XXVIII, No. 2

NOVEMBER 1, 1917

\$2.00 A YEAR, 10c A COPY

Champion **Toledo** Dependable Spark Plugs

"IT WAS extremely necessary that our car be equipped with the most reliable spark plugs obtainable; therefore, after careful investigation, we chose the Champion Spark Plug.

"Our trip to San Francisco gave your Spark Plugs perhaps as severe a test as they could have received in any service.

"One hour the temperature would be hot as 118 degrees, and within the next four or five hours the car would again be ascending mountain peaks where the temperature would be as low as 40 degrees.

"We kept accurate record of all data, and am pleased to advise that none of the above conditions affected the Champion Spark Plug in the least."

Champion Spark Plug Co.
Toledo, Ohio

More Proof of Superiority

R. S. Marsh, director of
Elgin Scout Car says:—



Champion
Conical
Price \$1.00



ELGIN SIX OFFICIAL SCOUT CAR, RUNNING OVER
NATIONAL HIGHWAY FROM ATLANTIC TO PACIFIC AND RETURN
AND FROM GREAT LAKES TO THE GULF AND BACK.
12000 MILES

OFFICIAL
AMERICAN
AUTOMOBILE ASSOCIATION
REPORTER

MAXWELL

Most Miles perGallon

Most Miles on Tires



Greater mechanical efficiency.
Greater economy of operation.

Greater length—roomier body.
Greater beauty—finer lines.

These mark the new 1918 Maxwell.

We have always said the Maxwell was the best light car ever built.
But the wonderful 1918 Maxwell outdoes even those great Maxwells of other years.

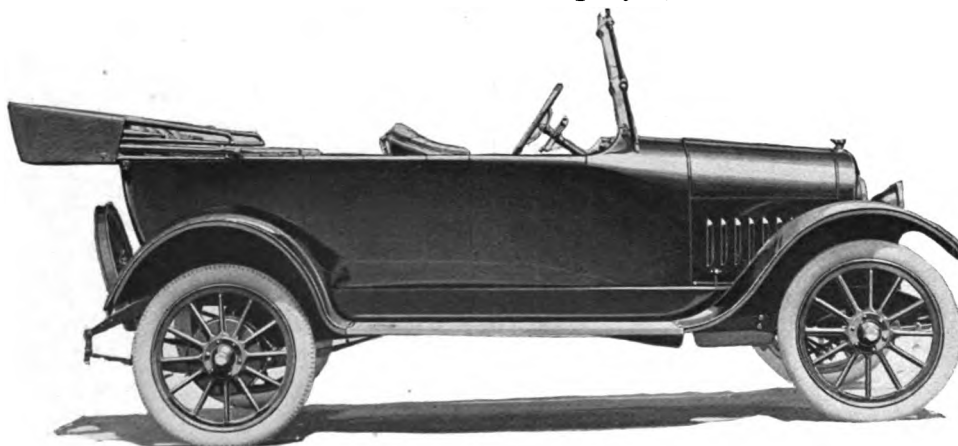
It has a 6-inch longer wheel base.

Has a frame 6 inches, instead of 3 inches deep, with the body resting directly on it.

Has the new rear springs of the latest type, like those just put in many cars of the highest price.

Has a sloped windshield and the body lines like the costliest cars.

The new Maxwell will amaze and delight you, as it has us.



Touring Car \$745.

Roadster \$745; Coupe \$1095; Berline \$1095; Sedan \$1095.

All prices f.o.b. Detroit.

Maxwell
MOTOR SALES CORPORATION

DETROIT, MICH.

Quality is Economy



THIS IS THE SIGN OF A HOOD DEALER

There is no better tire made than the Hood Tire. If we ourselves knew how to improve this tire, we would not hesitate to do it.

*More Plies of Fabric
More Rubber
Greater Mileage
Better Service*

Test out one or two Hood Tires yourself—time alone can prove that the highest quality is really in the end, the greatest economy.

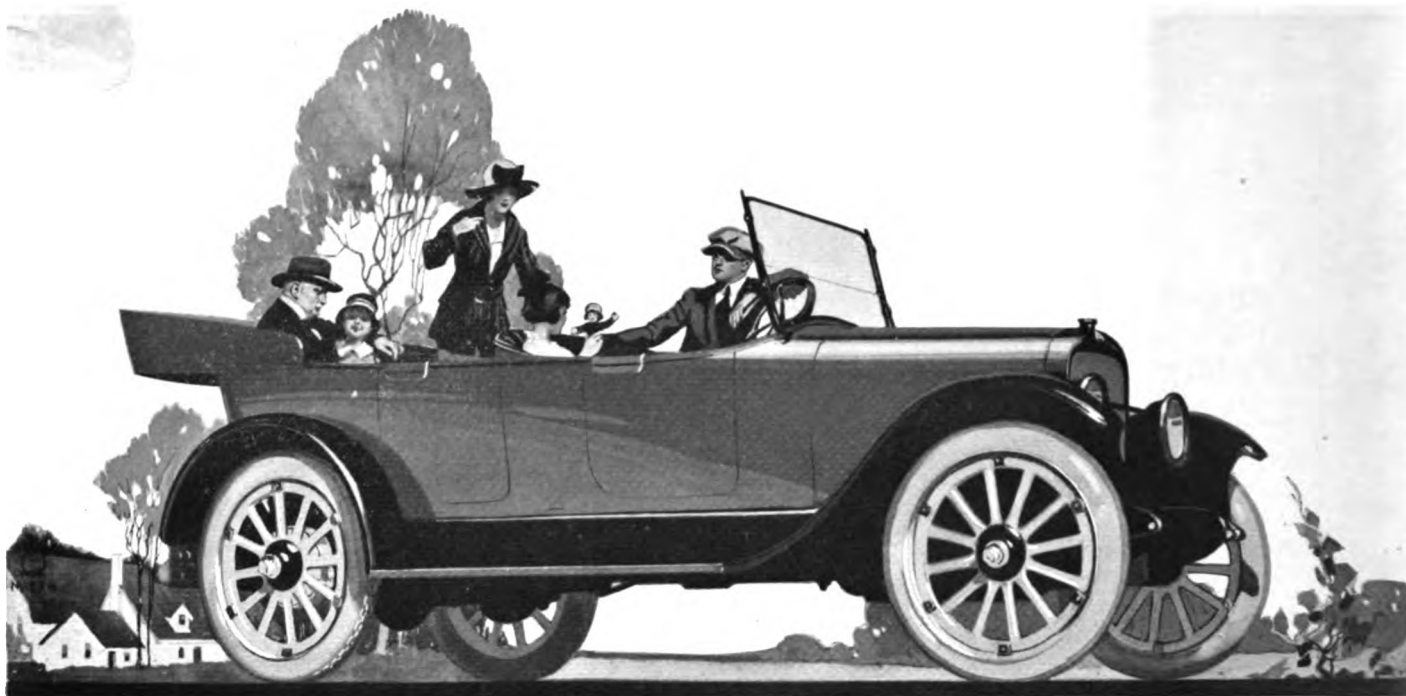
There is a Hood Dealer near you. If you cannot locate him write us.

HOOD TIRE CO., Inc.,

Factory Branch: 1223 So. Olive St., Los Angeles, California

Main Office, Watertown, Mass.

Mention "Motor West," Please, When Writing to the Advertiser



The Allen

New Series 41

Sixth Season of Success

The Allen car enters its sixth year with an enviable record. Wherever it is known it is well known—and well liked.

Allen owners and dealers everywhere confirm the general excellence of this car.

And now appears an Allen of greater power, greater beauty and many refinements—the new Series 41.

The Allen brothers build the vital parts in their own plant. They build not only for the first sale, but for the second and the third to the same buyer.

The dealer sells the Allen because the performance of the car causes him to believe in it, and in its makers.

He can assure you of continued satisfaction with a clear conscience.

For he reckons on the experience of Allen owners.

What you hear about the car from Allen owners, and what you will see and experience when you inspect and ride in this new model, will make you want to own an Allen.

Allen literature—giving actual color illustrations of all models—sent upon request

Specifications

Four cylinder, 3 $\frac{3}{4}$ " x 5" motor. Heavy crank shaft and bearings and light reciprocating parts give quick and abundant power with economy and long life.

Vanadium steel underslung rear springs, 55" long, contribute excellent spring action.

Bodies are pure stream line with high cowl and slanting windshield. Deep upholstery with very flexible back springs provides unusual comfort. The wide rear seat is 46" across cushion and 49" at top.

Choice of rich green or Allen brown finish—touring car; Allen brown—roadster; deep blue—Sedan.

Full floating rear axle, with spiral cut teeth on ring gear and pinion, insure strength and silence. Hotchkiss drive, two universals, means smooth, flexible driving action.

Full crowned fenders and aluminum covered running boards.

Auto-Lite two-unit starting and lighting, with Connecticut automatic ignition, all electric control on steering column by rotary switch.

Perflex honeycomb type radiator, with gracefully rounded shell.

Borg & Beck single dry plate clutch, extremely flexible.

Every nicety of equipment is provided to combine convenience and good looks.

\$1095 for 5-passenger Touring Car or 4-passenger Roadster

\$1395 for 5-passenger Sedan

Prices f. o. b. Fostoria, Ohio

Dealers are desired in territory not previously allotted.



THE ALLEN MOTOR COMPANY, FOSTORIA, OHIO

Mention "Motor West," Please, When Writing to the Advertiser

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"NON PAREIL"

Revolving Motor Stand
WILL FIT ANY MOTOR
SAVES ITS COST FIRST MONTH



PRICE \$30.00 F. O. B. SAN FRANCISCO

SEND FOR LITERATURE

ARTHUR H. HERTZ

MANUFACTURER'S REPRESENTATIVE

112 Market St.

San Francisco, Cal.



Guaranteed 7500 miles, Ford sizes; 6000 miles, large sizes.

No dealer ever stocked a better tire than the CENTURY PLAINFIELD TIRE.

No user ever got better satisfaction or more economy out of a tire than is to be found in the CENTURY PLAINFIELD OVER SIZED, SUPER SERVICE tires.

CALIFORNIA DISTRIBUTORS:

Territorial: City Service Store
Pacific Hardware & Steel Century Plainfield Tire Sales
Company, Company,
SAN FRANCISCO 430 Golden Gate Avenue,
SAN FRANCISCO

OREGON and WASHINGTON:

B. M. Wade and Company, R. M. Wade and Company,
PORTLAND SPOKANE

WRITE FOR DEALERS PROPOSITION.

Century
-PLAINFIELD Tire Co.

430 Golden Gate Avenue
SAN FRANCISCO

"A subsidiary of the Rubber Insulated Metals Corporation,
exclusive manufacturers of the BIMCO Rubber products by
the ELCHEMCO process." FACTORIES PLAINFIELD, N. J.

NOW

**SURE—LEE
CERTAIN—LEE
ABSOLUTE—LEE**

*You can get the Tires
you want and bank
on their Quality*



CHANSLOR & LYON CO.
WHOLESALE DISTRIBUTORS

Los Angeles, San Francisco, Oakland, Fresno, Portland, Tacoma, Seattle, Spokane

HERE'S PROOF FOR YOU

BRISCOE TOURING CAR TAKEN FROM STOCK GOES 1300 MILES
FROM JACKSON, MICH., TO ST. AUGUSTINE, FLA., AVERAG-
ING 26¾ MILES PER GALLON OF GAS FOR ENTIRE TRIP.

From Jackson, Mich., to St. Augustine, Fla., the sturdy Briscoe with the Half-Million-Dollar Motor, proved its economies every inch of the way.

Charles F. Hopkins, Jr., took the wheel of a brand new Briscoe at the Briscoe factories in Jackson, Mich. Read what he himself has to say of the record-breaking trip.

"We did even better than we hoped, negotiating the entire distance of 1297.7 miles on 48½ gallons of gasoline and 3 quarts of oil. This is an average of 26.74 miles to each gallon of gas and 434 miles to each quart of lubricating oil.

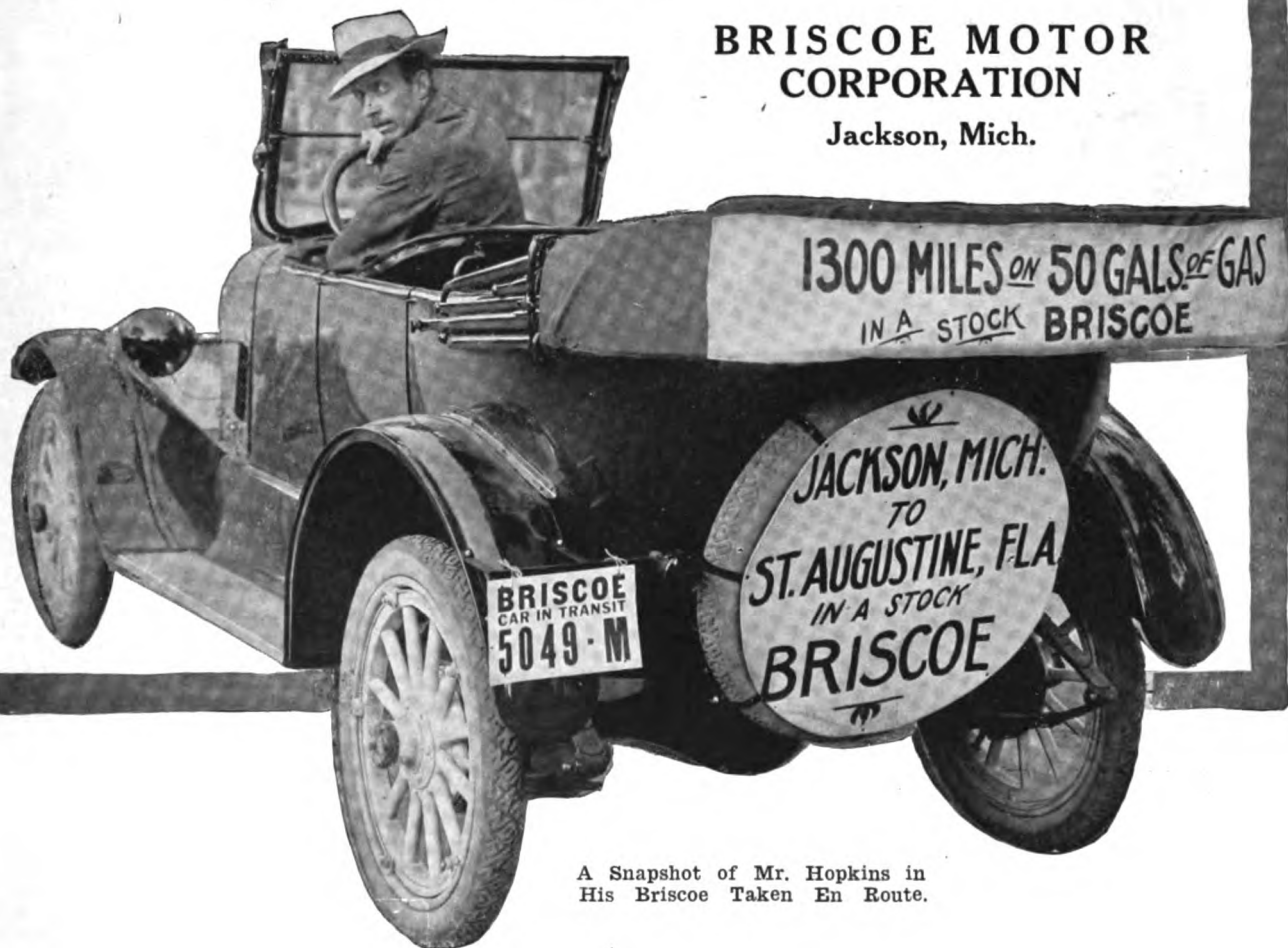
"The Briscoe hood was never lifted except the three times it was necessary to put in oil. One day we ran 21½ hours without a single motor stop, over one of the worst stretches of road we had on the entire trip. Some of the roads were heart-breaking, but the Briscoe negotiated them with ease. We did not even pump a tire between Jackson and St. Augustine."

SEE THE BRISCOE

Here in our show-rooms these same Briscoe economies await you.

BRISCOE MOTOR
CORPORATION

Jackson, Mich.



A Snapshot of Mr. Hopkins in
His Briscoe Taken En Route.

BRISCOE \$725
THE CAR WITH THE
HALF-MILLION DOLLAR MOTOR



NEW MODEL CADILLAC EIGHT BROUGHAM

FIRST COMPLETE SHOWING OF
Cadillac 8
OPEN AND ENCLOSED MODELS

In diversity of design, details of decoration and range of purpose the cars in this exhibition are notably superior.

CALIFORNIA **DOX LEE** DISTRIBUTOR

Los Angeles—12th and Main Sts.
FRESNO

SACRAMENTO

San Francisco—California and Van Ness
OAKLAND PASADENA

Attention!

You Who Own a

Ford-Maxwell

Overland-Studebaker



Special for Ford
Cars—AC Cico

FOLLOW the example of thousands of owners of these cars and equip with AC Spark Plugs. There's no other way to appreciate your car to the full! There's no other way to make *any* car render its maximum capacity. Note the list of leading machines equipped with AC. Their builders refuse to risk uncertain service and they install AC for the honor of the car. Do the same for yours—today. The extra cost is trifling, the values big. Look for the name, stamped in the porcelain—



½-inch Regular for
Willys-Overland—
AC Titan



¾-inch Regular for
Maxwell—AC Titan

AC Spark Plugs

The Standard Spark Plug of America

CHAMPION IGNITION COMPANY
Sole Manufacturers, Flint, Michigan



½-inch Regular for
Studebaker—
AC Titan

These Cars Are AC Equipped

Cadillac
Pierce-Arrow
Packard
Marmon
Hudson
Chalmers
Hupmobile
Chandler
Haynes
Chevrolet
Dort
Cole
Reo
Paige
Peerless
Pilot

Buick
Oakland
Oldsmobile
Nash
Kissel Kar
Premier
Knox
Abbott
Pathfinder
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Delco-Light
Murray
Bour-Davis
Economy
Jordan
Liberty

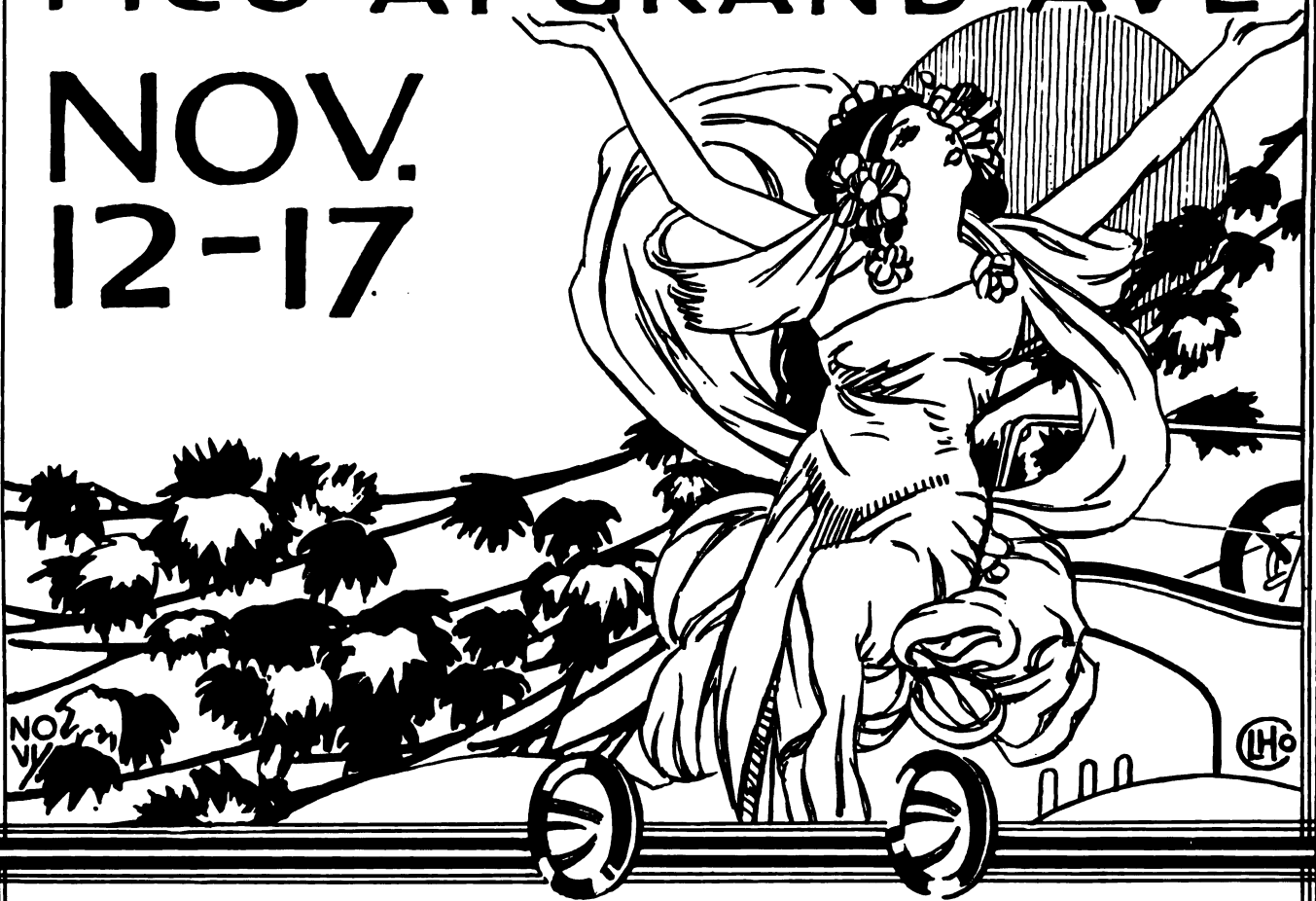
McFarlan
Paterson
Detroitter
Davis
Lexington-
Howard
Scripps-
Booth
Crane
Simplex
Stearns-
Knight
Saxon
Stutz
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Phianna
Locomobile
Disbrow
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Westcott
Monroe
Singer
Stephens
Dodge Bros.
McLaughlin
(Canada)
Dorris
Duesenberg

Hatfield
American-
La France
Henderson Bros.
Old Reliable
Trucks
Gabriel Trucks
Gramm-Bernstein
Trucks
Moreland Trucks
Wilcox Trux
Sterling Trucks
Republic Trucks
Diamond T Trucks
Four Wheel Drive

Federal Trucks
G. M. C. Trucks
Netco Trucks
Sandow Trucks
Signal Trucks
Brockway Trucks
Samson Tractor
Acme Trucks
Maxim Trucks
Menominee Trucks
M. H. C. Trucks
Riker Trucks
Stewart Trucks
Wisconsin Trucks

LOS ANGELES AUTO SHOW PICO AT GRAND AVE NOV. 12-17



*The
World
on
Wheels*

The Largest and Most Complete Display Ever Shown West
of Chicago of Motor Cars, Motor Trucks, Trailers, Tractors,
Motorcycles and Accessories, Including a

LARGE MILITARY EXHIBIT

Armored Tank

Armored Cars, Motorcycles, Etc.

9:30 A. M. TO 10:45 P. M. DAILY—MUSIC

Admission 25 Cents

Los Angeles Motor Car
Dealers' Association

MOTOR West

THE MOTORING AUTHORITY OF THE PACIFIC COAST

VOL. XXVIII., No. 2

NOVEMBER 1, 1917

\$2.00 PER YEAR

MOTOR VEHICLES IN THE KLONDIKE

**Increase in Improved Road Mileage
Followed by Influx of Motor Cars—
Traffic Handled by Motor Power.**

The range of operations of the automobile in the vicinity of Dawson, Yukon territory, and the southern part of the American territory of Alaska immediately contiguous is broadening every season and is rapidly coming to be used in every kind of transportation and traffic. Following the remarkably successful introduction of tractors in hauling wood up Hunker from the Klondike River last winter, the gradual advent of the motor truck in this district, a big share of the traffic of the Klondike gold region is now being handled by motor power. Resulting from the increased population and utility of the motor vehicle, the roads surrounding Dawson are being constructed more and more with a view to adapting them to that style of traffic. During the dry period cars travel from Dawson 25 to 50 out with considerable ease. Granville, 50 miles out, has been reached by cars during the dry season for several years. Money was voted this year for the connection of the most famous of Dawson's scenic wonders, the route up Bonanza, into a belt line.

McGraw to Erect New Building.

The McGraw Tire & Rubber Co., San Francisco, distributors of McGraw tires, will meet the insistent demand for the pneumatic and truck tires and inner tubes which it handles by the erection of a warehouse building of class A, steel and concrete construction. The new quarters will have a floor area of 25,000 square feet, with spur track facilities in front and in back of the premises. Since the company's advent upon the Pacific Coast, it has found it necessary several times to increase its facilities.

May Give Liberty Bonds for Tax.

Wholesalers and distributors of automobiles who are holding cars taxable under the new revenue bill may defer payments for six months by depositing Liberty bonds. The announcement has been made by John P. Carter, collector of revenue. The new law affects large dealers in automobiles, musical instruments, cosmetics, etc., who are required to pay one-half the tax imposed upon manufacturers. The tax is due Nov. 1. Bank certificates showing bonds have been paid for in full will be accepted until the bonds are delivered.

Studebaker Branch in Spokane.

Spokane, Wash., is advocated as the logical distributing point for automobiles destined for the Pacific Northwest territory by L. A. Keller, president of the Northwest branch of the Studebaker Corp. of America. The Studebaker is to establish a branch in Spokane, which will supply the territory west to the Cascades, south to the Columbia River and all of northern Idaho. "With freight rates what they should be for Spokane, we would make this city our distributing point for the entire Northwest. Spokane should have a four-fifths Coast rate from Chicago. There is no reason why cars should not be shipped here and then shipped on to the Coast. As it is now, we ship on and then back here quite frequently."

Portland Ford in Large New Plant.

W. H. Wallingford, exclusive Ford dealer in Portland, Ore., has occupied what is claimed to be the largest modern building in the Northwest devoted to the exclusive sales and service of Ford cars. The building is four stories high, with a basement capable of storing 100 machines. The building contains a sales room and offices, garage, repair shop, service station, paint shop and facilities for enameling Ford fenders and other metal parts. The total floor space in the new building at Sixth and Madison streets, is 40,000 square feet.

3000 CARS VISIT CAL. IN 6 MONTHS

**Motorists From Eastern and Western
States Flock to Coast in First Half
of Present Year.**

California's good roads, reinforced by its equally well known fine climate, brought into the State during the past six months almost 3,000 cars owned by and carrying Eastern visitors, according to figures collected by Chas. H. Thompson of Los Angeles, Cal., Jackson car dealer. Numbering the visitors by their home states, Arizona was the leader with 255 visiting cars. Washington was next with 217 cars; Illinois, 162; Oregon, 141 cars; Minnesota, 131; Colorado, 119; Texas, 110; Nevada, 99; New York, 94; Ohio, 60; Hawaii, 59; Michigan, 55; Montana, 47; Nebraska, 46; Missouri, 46; Utah, 46; Iowa, 45; Kansas, 43; Idaho, 38; Massachusetts, 36; New Mexico, 28; Wisconsin, 27; Oklahoma, 25; Pennsylvania, 23; and so on down the list to one car each for Delaware, Maine, Maryland, Alabama, Mississippi, North Carolina and Vermont. Arkansas, South Carolina and Virginia were the only states which did not send automobile tourists to California during the past six months.

Tri-State Assn. Joins A. A. A.

The Tri-State Automobile Club met at Walla Walla, Wash., recently and elected trustees for the ensuing year. It was voted to take out an enrollment membership in the American Automobile Association. The Tri-State Automobile Club will shortly succeed the Interstate Highway Association.

Tyrian Representative on Coast.

Sidney Spohn, representative for the Tyer Rubber Co., manufacturers of Tyrian tires, was a recent visitor in Los Angeles.

LEACH PUTTING UP BIG NEW BUILDING

Los Angeles Representative of Premier, King, Liberty and Dort Preparing for Banner Year.

Representing an investment of more than a quarter of a million dollars, the new building of the Leach Motor Car Co., Los Angeles, will be a most handsome addition to the new automobile row along Figueroa St., and indeed one of the largest and most finely planned structure of its kind in Los Angeles. The new building, which will house the agencies for Premier, King, Liberty and Dort cars, for which the Leach company is distributor, will be located on the northeast corner of Sixteenth and Figueroa Sts. upon a site purchased by the company. It will face for 160 feet upon Figueroa and 155 feet along Sixteenth St. The garage is composed of two distinct buildings, between which runs the inclined runway to the service department, and each unit receives the daylight upon four sides. Spanish renaissance is the style of the front building, facing on Figueroa St. The ground floor display room takes in the full area of the building under a high vaulted ceiling. Offices are located on the mezzanine floors at each end of the display room, reached by stairway and automatic elevator. The rear building will have dimensions of 90x160 feet, has three stories and is of reinforced concrete construction. There will be three entrances upon the ground floor. Each floor is reached from the service runway, the large freight elevator and several flights of stairs. The ground floor of this building will contain two separate departments for quick service and storage and demonstration stalls. The paint shop, with a capacity of 100 cars a month, will be on the second floor, adjoining the stock rooms where a complete line of parts are kept for the four makes of cars handled by the Leach firm. The third floor is arranged for two repair departments, one for new and one for old cars. In drawing the plans for its new home, the Leach company has kept constantly in mind the duty of prompt, efficient and satisfactory service to its customers and unusual care has been taken to make it unnecessary for visitors to come into contact with the noise and grease of the service and repair departments. The company recently celebrated its first anniversary. Twelve months ago Leach bought out a growing motor car agency in Los Angeles. He extended his line to include Dort, King, Premier and Liberty cars, making one of the largest dealer agencies in the

city. During the first year of the company's existence it has sold \$1,379,123 worth of cars. According to H. C. Bradfield, advertising manager of the King Motor Car Co., who recently visited the Coast, the Southern California agency sold more than \$150,000 worth of motor cars during the month of September alone.

Women Mechanics in Salt Lake.

As a result of the depletion of mechanics and helpers from the automobile establishments of Salt Lake City, women are being employed in various shop capacities. The first company to institute this system of overalled girl



MISS MILDRED LANE,

A plucky Salt Lake City girl, who is working as a mechanic in the shop of the Alkire-Smith Co.

shop workers was the Alkire-Smith Auto Co., Ford dealers, many men having been taken by the draft. The accompanying picture shows Miss Mildred Lane whose duty it is to assemble new Fords. The four women employed, according to Manager Ollie Goodwin, are even more efficient than the men whose places they took.

Oregon Dealers Hold Election.

The Motor Car Dealers' Association of Oregon held its annual election recently. M. O. Wilkins was re-elected president-manager at an increased salary, and Charles M. Menzies was re-elected secretary-treasurer of the association. H. E. Johnson, head of the truck bureau of the association, was elected vice-president.

Oregon Buys 1,528 Cars in Sept.

The latest figures on automobile registration in Oregon show that a total of 1,528 new automobiles were sold in Oregon during September of this year, as compared with about 800 for the same period of last year. Of the 1,528 cars registered in September, 1,318 were new vehicles and 111 were commercial cars. The total Oregon registration for the year on October 1 was 47,087 as compared with less than 34,000 for the twelve months of the 1916 series.

Stevens Takes Haynes in Oregon.

A. C. Stevens, Winton and Elgin six distributor, has taken the Oregon agency for the Haynes car, with headquarters in Portland. Henry L. Mann, who has acted as Haynes distributor for the past several years, has withdrawn from the automobile field in Portland and will, it is understood, go to San Francisco.

Prall Heads San Francisco Overland.

C. T. Prall has been appointed manager of the San Francisco, Cal., branch of the Willys-Overland Co. of California, succeeding Lawrence T. Wagner, resigned. While a comparative newcomer to San Francisco, Prall has spent some time in California, Oregon and Washington in his connection with the motor car trade. During his Oregon residence he became prominent as an active good roads advocate and was president of the Oregon Good Roads Association. Previous to his coming to the Coast he was connected with the Ford Motor Co. for several years, where he acted as wholesale manager, filling his duties with such skill that he was promoted to the position of Chicago branch sales manager. He built up the branch force there to a vigorous organization of seventy-five salesmen and was later promoted to assistant branch manager.

Fageol May Sell Preferred to Public.

The Fageol Motors Co., Oakland, Cal., has received permission from the state commissioner of corporations to offer 14,470 shares of preferred stock to the general public at a price which will net the company at par, \$10. The preferred will be accompanied by a bonus of not less than 1½ shares of common stock. Permission has also been given to issue not over 10,000 shares of common stock to employees.

Prather Heads S. F. Dealer Assn.

Philip T. Prather, manager for Don Lee in San Francisco, has been elected president of the San Francisco Automobile Dealers' Association. He succeeds J. A. Marsh, filling the vacancy caused by the latter's death recently.

Studebaker Men of South Meet.

Thirty Studebaker dealers of Southern California attended a recent monthly meeting of their organization at Corona, Cal. Touching on the details of the coupon books given to Studebaker owners entitling them to various kinds of service, it was decided to make it possible and profitable for Studebaker owners to apply for service at the nearest Studebaker agency. The garages doing the work will accept the coupons and at the end of the month send them to the different agencies and garages who issued them. Then payment will be made direct to the garage giving service, as represented by the coupons. Besides being a great convenience, the new coupon service system will do away with the complaint from car owners about getting things done cheaper in one town than another.

Cole Agents in Trans-Bay Section.

The R. T. Wolford Motor Co., Oakland, Cal., has taken the Cole car agency for Alameda and Contra Costa counties and has occupied its new quarters on upper Broadway, Oakland.

Bacon Joins Renstrom Sales.

George V. Bacon has joined the F. O. Renstrom Co., San Francisco, as salesman of the Bethlehem truck in the company's wholesale department. In the October 1 issue of Motor West an error was made in stating that he had been appointed advertising manager for the Renstrom organization.

Twin Fire Plug Branch in L. A.

The Twin Fire Spark Plug Co., Detroit, will open a branch in Los Angeles, Cal., shortly.

Seager Takes Jordan and Grant.

The S. F. Seager Co. has succeeded the Oldsmobile Co. of California and has taken over the distributing of Jordan and Grant cars. The new company is headed by Schuyler F. Seager as president. Seager was formerly president of the Oldsmobile Co. of California. The personnel of the old company will be retained unchanged. The J. W. Leavitt Co., Los Angeles, has taken the Oldsmobile agency for Southern California.

Common Sense Luster in the East.

F. J. Kelley, manager of the Common Sense Mfg. Co., San Francisco, manufacturer of Common Sense Luster Restorer for automobiles, has gone East to interest capital there and form a million dollar corporation which will market his product throughout the country. Kelley started in San Francisco as a peddler, working on cars standing in the streets. Later he joined forces with an automobile concern and

sold thousands of dollars' worth of his preparation. Finally he organized a company of his own and Common Sense Luster Restorer has proved its excellent qualities in the offer, which he refused, of \$100,000 for the patent rights on his luster restorer. While in the East he will open branches for distribution on the Atlantic seaboard.

Wade Gets Century-Plainfield.

Arrangements have just been completed with R. M. Wade and Co., of Portland, Ore., to act as exclusive territorial distributors of Century-Plainfield tires for Oregon, Western Washington, Western Idaho and Montana. The R. M. Wade Co. has a branch house in Spokane and is the authorized Ford agent for the surrounding territory. The company has also added an automobile accessory department to its business and will handle a few important lines, among which Century-Plainfield tires will be the leader. The Wade company is an old jobbing house and well established, having been in business in Portland for fifty-two years.

Gerlinger Joins Selden Truck.

Sales Director H. T. Boulden, of the Selden Truck Sales Co., Rochester, N. Y., has just added another string to his bow of division sales managers; this time in no less a personage than Edw. E. Gerlinger, who is well known on the Pacific Coast for his constructive work in establishing the Federal Co. in that part of the country. For a time Mr. Gerlinger headed the Gerlinger Motor Car Co. of Portland, Ore., as vice-president and general manager, with branches at San Francisco and Seattle.

As Pacific Coast sales manager of the Selden Truck Sales Co. he will be in charge of that company's business in the territory extending from San Diego to Vancouver, and inland to Salt Lake City, with headquarters at San Francisco.

The appointment of Mr. Gerlinger to this most important post in the Selden organization completes a chain of factory division representatives extended over the entire United States and the commencing of an aggressive campaign for domestic representation.

Elgin Representative Visits South.

J. P. Winterson, representative for the Elgin Motor Car Corp., Chicago, Ill., is now a visitor in Los Angeles in the interests of his company and investigating the local motor car field.

Agent for A. & H. On Coast.

George E. Starr has been appointed Pacific Coast agent for the A. & H. Mfg. Co., New York, manufacturer of A. & H. valve threaders.

ARNOLD OPENS NEW BUILDING IN L. A.

Handsome Structure Downtown Will Supplement Present Olive St. Quarters in Automobile Row.

Harold L. Arnold, distributor of Hudson and Dodge cars and Vim trucks in Southern California, recently opened his fine, new downtown building in Los Angeles to the public. The new structure, located on the northwest corner of Seventh street and Grand Ave., represents an outlay of about \$100,000. It is two stories in height and faces for 100 feet on Seventh St. and 105 feet on Grand Ave. The construction is brick and concrete, with an outer surface of white cement plaster. Plate glass makes up the greater proportion of the frontage on both Seventh and Grand, furnishing unusually good daylight conditions. The company's offices will be located on a mezzanine floor. The new building is located in the center of the new business district now growing up along West Seventh St. It is understood that the older Arnold quarters at 1112-34 S. Olive St. will be retained indefinitely. During the twelve months ended August 1, the Arnold company sold 3,159 cars.

Gaffney Manages Lord Used Cars.

George Gaffney has been appointed manager of the used car department of the Lord Motor Car Co., Los Angeles, Cal., Maxwell and Velie dealers.

Heads Lexington Sales in South.

H. L. Perkins, formerly connected with the Irving Motor Car Co., Los Angeles, Cole car dealers, has resigned to become sales manager for Wisdom & Co., Los Angeles, distributors of Lexington cars in Southern California and Arizona.

Sapp Represents Columbia on Coast.

W. D. Sapp has been appointed Pacific Coast representative for the Columbia Motors Co., Detroit.

Christy Walsh with Van Patten.

Christy Walsh, former advertising manager for the L. H. Rose-Chalmers Co., San Francisco, Cal., has been called to New York, where he will take a prominent position with the Van Patten Advertising Agency.

Hayes Wheel Branch on Coast.

Castle & Kyte, sales agency for Hayes wire wheels, will open a Coast branch shortly. Mr. Kyte of the firm is at present a visitor on the Coast.

ARIZONA REPORTS

18,791 CARS OCT. 1

Increased Registrations of Motor Cars Follows State's Development of Good Roads System.

Arizona is rapidly rounding out her system of good roads and keeping pace with this work as a natural result is the state's development as a motor car field. Registrations of new cars during the past two months have exceeded 2,000, and prior to this, on July 1, 1917, over 16,000 automobiles had been licensed within the state. By Oct. 1 this had increased to 18,791, which would mean a ratio of one car to approximately every 16 persons. The increase in automobiles is but a reflection of the general prosperity existing throughout the state in all branches of the mining, cattle and farming industries.

Bearings Service Head on Coast.

Ralph S. Lane, president of the Bearings Service Co., Detroit, recently visited San Francisco on an inspection tour, taking in the twelve branches of the company west of Chicago.

Nate LaVene Forms Agency.

Nate LeVene, of San Francisco, for years connected with the Hooper-Honig-Cooper Advertising Agency, resigned and will form an agency of his own, to specialize on automobile accounts.

Latham Heads Goodrich in Salt Lake.

E. M. Latham has been appointed manager of the B. F. Goodrich Rubber Co.'s local store in Salt Lake City, Utah. He succeeds G. M. Gay, who has been transferred to the company's branch in Los Angeles, Cal., where he will be general adjuster for the entire West.

Simpson Over Nash in Salt Lake.

Carl J. Simpson, vice-president of the Pacific Nash Motor Co., has taken charge of the Nash car and truck distributing branch in Salt Lake City, Utah, and will act as inter-mountain district manager.

Martin, of Cassidy, Visits L. A.

A. L. Martin, who was recently appointed Western manager for the Edward A. Cassidy Co., Inc., left Los Angeles recently after a week's visit. He will represent west of Denver the various lines of the Edward A. Cassidy Co., including the Noviol Conaphore lens, which is handled on the Pacific Coast by Chanslor & Lyon, Stock-Nichols, and others.

Republic Truck in Beet-Hauling Test.

F. D. Johnson, field agriculturist for the Amalgamated Sugar Co., Kimberly, Ida., thought the demonstration of a two-ton Republic truck at Twin Falls, Ida., of sufficient importance to all beet-growers to attend. In his report, Johnson says: "The Republic truck was required to carry a load in excess of its capacity over ground that had been plowed to a depth of ten inches. I drove it over the plowed surface in forward and reverse directions, at times carrying the added weight of four men. Each test to which the truck was subjected was performed in so commendable a manner as to justify my unqualified indorsement of its adaptability to sugar beet and potato hauling." The same day a two-ton Republic carried forty-two bags of cement, weighing a total of 4,032 pounds, back and forth over the same plowed land, clinching its argument as the supplanter of the horse in farm hauling.

Anderson Retail Fords in Salt Lake.

Morgan Anderson, connected for the past year with the Ford Motor Co., Salt Lake City, Utah, has joined the sales department of the Universal Car Co., of the same city, and will be retail distributor of Ford cars.

Northwest Co. Takes Nash.

The Northwest Motor Co., Seattle, Wash., has been appointed Nash agency succeeding Eaton & Campbell, who have relinquished the agency.

Tacoma Law Hinders Car Thefts.

An ordinance has been passed in Tacoma, Wash., preventing "automobile camouflage." It provides that every public garage must make a daily report to the police of the cars left with them, including the identification numbers on the machines and a full description.

To Manage Club of West Washington.

Douglas A. Shelor has been named manager of the Automobile Club of Western Washington.

Young Manages Smith Bros. Sales.

A. M. Young has been appointed sales manager of Smith Bros., Los Angeles, Cal., distributors of Peerless and Paige cars. Young is a pioneer automobile man in Southern California and introduced the Paige car in that territory.

G. & J. Tire Agent in Oakland.

R. N. McKinnon and Elmer G. Cox have formed the Cox-McKinnon Co., Inc., Oakland, Cal., buying out and succeeding C. A. Muller, to handle G. & J. tires.

Salt Lake Has Strict Judge.

Salt Lake City motorists, who used to fear only the loss of a few dollars from their purses as a result of getting pinched for speeding, now face jail sentences and perhaps the impounding of their automobiles.

Judge W. H. Wilkins, new police judge, has already sentenced six men to jail for speeding. One of the number was a professor of the University of Utah, another a prominent realty dealer of the city. The first got one day in jail, the last twenty days, and Judge Wilkins has given out an interview in which he promises 30 days to the next speeder found guilty.

The speed laws allow 25 miles on avenues and streets outside the congested business section. This, Judge Wilkins believes, is too high—"express train speed," he terms it. He is now engaged in learning whether or not he has the right to impound cars as well as their owners.

Cowan Heads Leavitt Truck Dept.

W. K. Cowan, pioneer automobile dealer in Los, has been appointed manager of the commercial car department of the J. W. Leavitt Co., Chevrolet distributor. Cowan is well-known as having been the first man in Los Angeles who handled motor cars as a business. His dealer experience dates from 1899 and at one time he was one of the largest distributors of cars in Southern California.

Takes Charge of Spokane Mack.

W. F. Barnes, Spokane, Wash., has assumed charge of the Mack distributing station for the T. G. Young Co., Spokane.

Lexington Agency in San Francisco.

The California Motor Sales Co., San Francisco, has been formed to handle the Lexington car in Northern California. L. D. Allen is head of the new company, acting as president and general manager. The new agency has located at 1319 Van Ness Ave.

Henderson Over S. F. Overland Sales.

F. A. Henderson has been appointed sales manager of the San Francisco branch of the Willys-Overland Co., succeeding J. L. Holmes, who resigned recently. The appointment was made by C. T. Prall, who recently took charge as manager of the branch. Henderson was a former resident of San Francisco, but has been for several years with the central division of the Willys-Overland Co.

Master Truck Dealers for Washington.

The Standard Motor Car Co., Tacoma, Wash., has contracted to handle Master trucks throughout the state of Washington for a period of five years.

Phila. Storage Battery in S. F.

The Philadelphia Storage Battery Co., of Philadelphia, will open a branch office and stock depot in San Francisco early in November. The company's first Coast Branch was opened in Los Angeles a year ago and the sale of "Diamond Grid" batteries has grown to such an extent that another branch is necessary at San Francisco in order to take care of the rapidly expanding business in that locality.

The new branch will carry a complete stock of starting batteries for all automobiles and plates for assembling vehicles batteries. The business will be strictly wholesale in accordance with the policy in effect at Los Angeles.

Arthur Affeld will have charge of the Los Angeles office and A. P. Clark will operate the San Francisco office. C. L. McWhorter, manager of the Pacific Coast Division will make his headquarters at the San Francisco office. Mr. McWhorter has just returned from a six-weeks' visit to the factory.

The Philadelphia Company occupies a unique position in the battery business in the respect that it furnishes 90% of all the batteries used in electric passenger vehicles. Its starting battery product, which bears the trade mark name of "Diamond Grid," is revolutionizing the starting battery field on account of its non-buckling plates and hard-wood long-life separators.

Consolidated Sales Gets S & M Lamp.

The Consolidated Sales Co., has been appointed exclusive factory distributors for the S & M Lamp Co., of Los Angeles.

Both the manufacturer and the distributor are well known. S & M is the pioneer spotlight. Mr. Sherriffs, the owner of the factory, having designed the first windshield spotlight ever seen in this country. Consolidated Sales Co. is Coast distributor for such well-known accessory manufacturers as C. A. Shaler Co., Osgood Lens & Supply Co. The International Rubber Co., The Hall-Thompson Co., and others.

The S & M spotlight complies fully with the present California road lighting law. Mr. Sherriffs has patented a bracket which makes it impossible to raise the light above the legal limit of 42 inches, at the same time sacrificing none of the mobility of the light, without which it is useless.

A great compliment was bestowed upon the S & M spotlight and the Pacific Coast when Harry Stutz several years ago chose it for factory equipment on his car. Every Stutz delivered ever since bears an S & M.

Haynes Light 12 in High-Gear Record.

A new record for high-gear performance was recently established at Oakland by a Haynes Light Twelve seven-passenger touring car. Wayne Corbin, of the Haynes agency in that city, driving a brand-new Haynes demonstrator and carrying three other passengers, recently captured the silver trophy offered by an Oakland newspaper to the stock car climbing in high gear to the highest point on Mount Diablo, near Oakland. The summit of the mountain is nearly 4,000 feet above sea level.

Corbin drove the Haynes 36 feet beyond the point reached by the previous holder of the cup, which was first put up early last Spring and has been held by several makes of cars since that time. Rivalry for its possession has been spirited as Mount Diablo is declared to represent the hardest high-gear test in the world.

The climb up Mount Diablo represents nearly 11 miles, every mile being over a winding grade that eventually reaches an altitude of 3,867 feet above sea level. Nearly all cars require the constant use of second gear to make the climb, and then resort to low gear on the final steep pitch. The point reached by Corbin was half-way up this last stretch.

Cal. Registers 285,863 Cars.

Registrations of automobiles in California total 285,863, according to figures issued for Oct. 27 by N. A. French, superintendent of the state motor vehicle department. The receipts from tagging automobiles amounted to \$2,649,580 on the same date. Motor car dealers numbered 2,269 and have paid in total fees of \$48,087.

Mission Bell Selected, Wide Choice.

The mission bell which will appear as the California state seal upon 1918 motor vehicle license plates was selected from out of more than two dozen suggestions. Among the other seals suggested were Mount Lassen, Mount Shasta, fruit, oranges, grapes, prunes, sequoias, miner's pick and pan, nuggets, Marshall Monument and the state capitol.

New Paige-Saxon Agency in Tacoma.

The Paige-Saxon Motor Co., Tacoma, Wash., has been formed by Roy A. Parnham and Otis Johnson and has taken over the offices and plant of J. B. Schabel at 1201 A St.

New Signal Agency in Spokane.

Logan & Bates, Spokane, Wash., Chalmers car distributors, have taken over the agency for the signal. O. R. Sprague will have charge of the company's truck department.

THREE PER CENT ON MAKER'S PRICE**Rulings of Treasury Department on Various Phases of War Revenue Tax on Automobile Industry.**

Manufacturers selling new automobiles, including trucks, on and after Oct. 4, 1917, will pay a tax of 3 per cent on the manufacturer's selling price. This is the chief of the provisions of the war revenue act which affects the automobile industry, and which are yet subject to final confirmation. The tax is levied on the price the maker receives for the car—not the list price, unless actually sold for that. When the price is paid part in money and part in other considerations (second-hand car), the tax is on the price and not on the actual cash received. If the manufacturer passes the tax on, the Treasury Department believes that the price he receives should include the present price of the car plus the tax collected. For example, if the manufacturer sells the car for \$800 plus the war tax, \$24, the government will assess the tax of 3 per cent on \$824, the price he receives in making the sale. Thus, to receive his full \$800, the manufacturer would have to bill his price at \$824.74, of which 3 per cent or \$24.74, will be paid to the government, leaving the manufacturer his \$800 net. Wholesalers or combined wholesalers-retailers, holding new motor cars and trucks, for sale, Oct. 4, 1917, are taxed 1½ per cent on what was paid to the manufacturer. They will not be taxed, however, on automobiles sold and delivered before May 9, 1917, on which title is retained as security for payment of purchase money. The Treasury officials are disposed to consider second-hand cars not taxable. Chassis will be taxed. Extras will be taxed when shipped with the car and making one sale. If the car, however, is shipped regular and extras purchased extra, extras will not be taxed.

A. H. Coates Changes Location.

Alfred H. Coates, Western representative for the Sheldon Axle & Spring Co., Wilkes-Barre, Pa., the Whitney Mfg. Co., Hartford, Conn., the Standard Roller Bearing Co., Philadelphia, Pa., and the Kellogg Mfg. Co., Rochester, N. Y., has moved to 41 Spear St., San Francisco. He will carry a complete line of all parts for Sheldon worm-drive axles.

Grant Car Agent in Seattle.

The Campbell Motor Car Co., Seattle, Wash., has succeeded the Grant-Coffin-Campbell Co., as Grant car distributor.

Ready for Los Angeles Seventh Motor Show

One Hundred and Three Exhibitors Will Occupy Nearly 90,000 Square Feet of Space in the Billy Sunday Tabernacle and Inter-communicating Tents—Decorations Will be Unusually Beautiful—Statistics Show Los Angeles' Pre-eminence as Automobile Capital of Southwest

WITH a total of nearly 90,000 square feet of space assigned to more than 100 exhibitors, the seventh annual exhibition of the Los Angeles Motor Car Dealers' Association will be by far the most pretentious affair of the kind ever held west of the Mississippi River. The show will be held November 12-17 in the huge Billy Sunday Tabernacle in combination with three enormous inter-communicating tents. The entire show will be on one level, there being no stairs to climb or descend in passing to and fro between the Tabernacle and the tents. If, at the end of the sixth day, there appears to be a demand for it, the committee in charge will extend the show for three days into the following week—the 19th, 20th and 21st of November.

The Show Committee—P. H. Greer, Ralph Hamlin, J. A. Stoner and Harold L. Arnold—with J. S. Conwell,

president of Los Angeles City Council, as manager, have been at work on the details of the exhibition for the past six weeks, and have only awaited the departure of the Reverend Billy in order to complete the work of preparing the building and erecting the tents.

The enormous demand for space, and the makeshifts the Show Committee was compelled to adopt in order to provide for it, again brought to the front the necessity for a building in Los Angeles of sufficient size to house exhibitions and accommodate large conventions. The metropolis of Southern California is favored of the gods in that, if everything else fails, tents may be erected in a short time, and, with good weather practically assured, shows, conventions or revivals may be conducted for weeks at a time without fear of the elements. Even Billy Sunday must admit that Los Angeles is something of a dry town, inasmuch as the precipitation during his six weeks' revival has been practically nil. The committee which backed him in his recent drive on the devil's forces will have an unexpected addition to their receipts from the rental paid for the Tabernacle, which, it is said, will be torn down immediately after the show.

Los Angeles, the tenth city in point of population in the United States, and the twenty-sixth in the list in the total value of manufactured products, is without a building of suitable size to house a show of any great proportions. San Francisco, Denver, and many other Middle Western and Coast cities are well provided in this respect. The possession of an adequate municipal auditorium is a recognized asset for any metropolitan city, and Los Angeles must be considered provincial until she shall have equipped herself with a building amply large to house the annually recurring automobile show and other exhibitions and conventions.

That Los Angeles, as the premier motoring center of the Pacific Coast, should open the show season west of the Rockies, is but natural. In no other city in this section has motoring obtained such a firm hold. In no city in this territory are the annual sales so large. Indeed, few Eastern municipalities can point to a volume of sales equal to that of Los Angeles, while its proportion of motor cars per thousand of population is greater possibly than that of any large city in the United States.

That the automobile and accessories business in Los Angeles is on a firm and enduring basis may be gathered from the character of the establishments which house the many companies engaged. Only a few years ago any kind of a ramshackle wooden structure was deemed sufficient in the way of a home. Now concrete and steel buildings, costing in many cases hundreds of thousands of dollars, are the rule. The accompanying pages will give some idea of the character of the architecture and the scope of some of the principal buildings. Not a few of these buildings have just been completed or are still in process of construction, while several companies have

EXHIBITORS OF PASSENGER CARS. Tabernacle.

Earl V. Armstrong, Inc.	Chandler
J. V. Baldwin Motor Co.	Saxon and Mitchell
Walter M. Brown Co.	Stutz
W. J. Burt Motor Car Co.	Auburn
W. E. Bush	Pierce-Arrow
Empire Motor Sales Co.	Empire
Al. G. Faulkner Co.	Marmion
Greer-Robbins Co.	Chalmers and Hupmobile
Howard Auto Co.	Buick
Leach Motor Car Co.	Premier, Liberty, Dort and King
Locomobile Co. of America	Locomobile
Lord Motor Car Co.	Maxwell and Velle
George I. Lufkin & Co.	Pathfinder
H. C. McVey Co.	Oakland and National
Motors Distributing Co. of So. Cal.	Roamer
Oldsmobile Co.	Oldsmobile
Reilly Motor Car Co.	Moon
Eugene Schuler Co.	Pilot
Smith Bros.	Paige and Peerless
Scott & Hoadley	Stanley Steamer
Steele Motor Sales Co.	Elcar
I. H. Stratton Co.	Westcott
Studebaker Corp. of America	Studebaker
White Auto Co.	White
The Winton Co.	Winton
Wisdom & Co.	Lexington
Wright Motor Car Co.	Inter-State

East Tent.

C. S. Anthony	Glide
Harold L. Arnold	Hudson and Dodge
Anderson Electric Car Co.	Detroit Electric
Apperson Motor Car Co.	Apperson
Conwell-Hathaway Co.	Monroe
Ralph Hamlin	Franklin & Scripps-Booth
J. W. Leavitt & Co.	Chevrolet
McFarlan-Pacific Co.	McFarlan
Owen Mag. Sales Corp.	Owen Magnetic, Marion Handley
Phillips Distributing Co.	Daniels
Southwest Motors Co.	Columbia
Troy Motor Sales Co.	Nash
Turner-Whitford Co.	Ross, Detroit, Woods Dual Power

South Tent.

Lynn C. Buxton	Stearns-Knight
Irving Motor Car Co.	Cole
Don Lee	Cadillac
Pacific KisselKar Branch	KisselKar, Briscoe, Doble
Speers Motor Co.	Haynes and Grant

perfected plans for new buildings upon which work will be started in the very near future.

Nearly 90,000 Square Feet of Space Sold.

The show will open Monday, November 12th, at 2 p.m. Each day the show will open at 9:30 a.m. and will close at 10:45 p.m. The exhibit is under the general direction of J. S. Conwell, supported by the following committee: P. H. Greer (chairman), Harold L. Arnold, Ralph Hamlin and J. A. Stoner.

Floor space covering an area of nearly 90,000 square feet will be devoted to the display of pleasure cars, trucks, trailers and accessories.

One hundred and three exhibits will be housed in the main building and tents. The tabernacle will contain pleasure cars only, the East tent will be occupied by exhibits of pleasure cars and trucks, while the North tent will be given over to the exclusive display of trucks, trailers and tractors.

The main entrance will be through the South tent on the Pico street side. Beneath this top there will be a number of pleasure cars surrounding a completely armored "tank" car, a duplicate of the steel monsters of destruction which are now being used to advantage by the Allies on the European war front.

No other engines of annihilation have attracted as much attention or speculation as these big mobile forts with the possible exception of the giant howitzers with which Germany startled the world at the outbreak of the war. The "tanks," according to correspondents, are able to clamber over trenches, crush down buildings and barbed wire entanglements, cross small streams and go wherever their pilots choose to direct them. In addition to the "tank" car, the show committee will exhibit several armored automobiles.

A decorative scheme of unusual beauty has been worked out for the exhibition. Giant palms, flowers and potted plants in profusion will be placed throughout the main building and tents and the whole will be brilliantly lighted by the liberal use of high-powered nitrogen lamps. Floors will be laid over the entire ground space and the flooring will be covered with "silence fabric" in both aisles and exhibits. Three band stands will be erected in the main building, which will also house the headquarters for the management, the press and rest rooms.

The Automobile Club of Southern California will sign the entire show, including all makes of cars and accessories. These signs will carry the name of the exhibitor and the name of the car or accessory. They will be the regu-

EXHIBITORS OF MOTOR TRUCKS.

East Tent.

C. S. Anthony.....	Signal and Avery Tractor
Autocar Sales & Service Co.....	Autocar
Barnett Auto Body Co.....	Truck attachment, Barnett body
W. E. Bush.....	Pierce-Arrow
Lord Motor Car Co.....	Maxwell
McFarlan-Pacific Co.	Stewart
H. L. Miller.....	Little Giant
Pacific KisselKar Branch.....	KisselKar and Federal
Service Truck Co. of Cal.....	Service
F. M. Sinsabaugh.....	Gramm, Commerce and Menominee
Studebaker Corp. of America.....	Studebaker
Troy Motor Sales Co.....	Nash
U. ited Motors Co.....	Olson Truck Attachment
Olds, Banta & Smith.....	Woodward Truck Attachment

North Tent.

Harold L. Arnold.....	Vim
International Mack Corp.....	Mack and Saurer
J. W. Leavitt & Co.....	Chevrolet
Moreland Motor Truck Co.....	Moreland
H. G. Pendell.....	Denby, Koehler and Winther
D. F. Poyer Truck Co.....	Republic
White Auto Co.....	White

lar club road sign made in colors to harmonize with the general decorative scheme.

The growing interest taken by motor car manufacturers and dealers in motor car shows of the Los Angeles Motor Car Dealers' Association is evidenced by the fact that practically every well-known car made in the United States will be represented. This year's ground space shows an increase in area of 50 per cent over last year's show.

The scene of this year's show is peculiarly strategic from the attendance standpoint. The Billy Sunday tabernacle covers nearly a full city block close to the business center of the city, and is served by a number of trunk car lines. Carpenters are now at work transforming the big structure into a palace of splendor. Where bare beams once stood the art of the interior decorator is raising seductive palms and trellised arbors. In the South tent or main entrance of the show the side-walls will present a panorama of marine warfare with battleships, destroyers and submarines in action.

Something About Los Angeles' First Show.

Something over ten years ago when automobile row centered around Tenth and Main streets, the motor car dealers in Los Angeles suddenly were struck with the appropriateness of holding their first automobile show. The idea of motor car shows for the Pacific Coast was still venturesomely novel, for the first national show had been held but six years before. The Pacific Coast, how-



THE MEN WHO WILL HAVE CHARGE OF THE SEVENTH ANNUAL SHOW OF THE LOS ANGELES DEALERS.

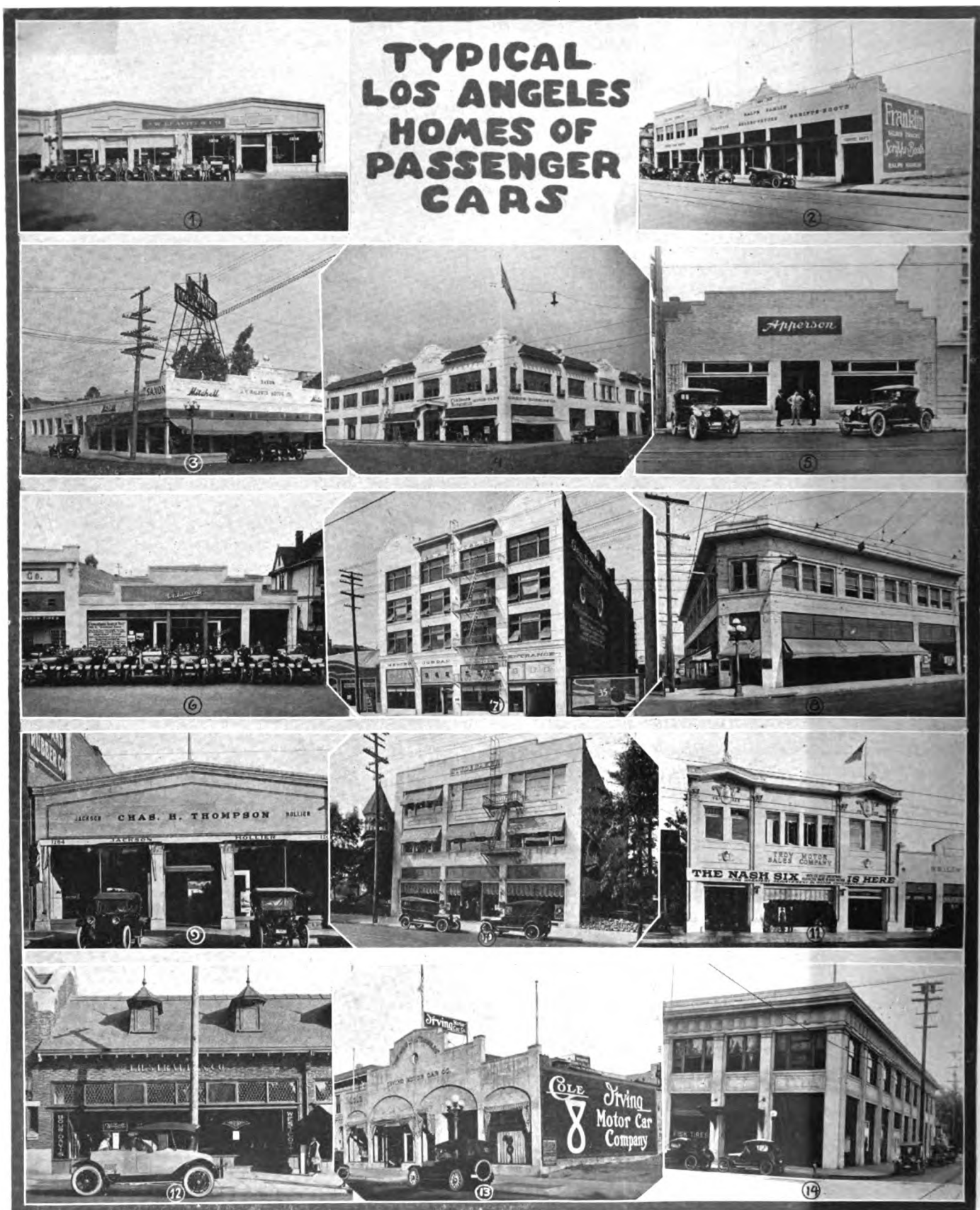


Photo by Hughes

(1) J. W. Leavitt & Co., Chevrolet. (2) Ralph Hamlin, Franklin and Scripps-Booth and Selden Trucks. (3) J. V. Baldwin Motor Co., Mitchell and Saxon. (4) Greer-Robbins Co., Chalmers and Hupmobile. (5) Where Hanshue handles the Apperson. (6) Headquarters of the Oldsmobile Co. of California. (7) Geo. R. Bentel Co., Mercer and Jordan, one of the finest on the Coast. (8) Factory branch of the Locomobile Co. (9) Chas. H. Thompson, Jackson and Hollier. (10) Headquarters of Studebaker in Southern California. (11) Troy Motor Sales Co. quaters, home of the Nash passenger cars and trucks. (12) I. H. Stratton Co., representatives of the Westcott. (13) Irving Motor Car Co., Cole. (14) Home of the Wright Motor Car Co., representative of the Inter-State cars.



Photo by Hughes

(15) William E. Bush, Pierce-Arrow cars and trucks. (16) Earl V. Armstrong's new building—Chandler. (17) Al Faulkner's handsome Marmon headquarters. (18) Where the Pathfinder and Davis hold forth. (19) Pacific KisselKar Branch—KisselKar, Briscoe and Ford. (20) Walter Brown's new Stutz agency building. (21) Factory branch of the Winton Co. (22) Conwell-Hathaway Co.—Monroe. (23) Speers Motor Co.'s new building—Haynes and Grant Six. (24) Smith Brothers—Peerless and Paige. (25) New home of Stanley Steam cars. (26) Turner-Whitford Co.—Ross, Detroit and Woods Dual Power. (27) Lynn C. Buxton—Stearns. (28) The Eugene Schuler Co.—Pilot. (29) C. Will Riden—Elgin and Allen cars. (30) Wisdom & Co.—Lexington and Elcar. (31) Owen Magnetic Sales Corp.—Owen Magnetic and Rauch & Lang electric. (32) Aston Motor Car Co.—Pullman.

ACCESSORY EXHIBITORS.**Tabernacle.**

Austin, Bryant & Carter, Pennsylvania Oils and Greases
 Auto Theft-Signal Sales Co., Auto Theft-Signal, Nu-Ra Lens,
 Auto Gear & Parts Co., Gears and Axle Shafts
 Ahlberg Bearing Co., Ball Bearings
 Airsafe Inner Tire Co., Airsafe Inner Tires
 Block-Scherfee Vaporizer Co., Block-Scherfee Vaporizer
 Brookwell & Co., Delion Tires
 Brown & Caine, Inc., Ignition and Lighting Supplies
 Cambria Spring Co., Inc., Springs, Wheels and Bumpers
 Champion Spark Plug Co., Spark Plugs
 Dellamore, A. A., Dellamore Electric Turntable
 Desmond's, Automobile Apparel
 Ensign Carburetor Co., Ensign Carburetors
 Firemen's Fund Insurance Co., Insurance
 Hamilton Spring Insert Co., Hamilton Roller Bearings,
 Spring Insert, Shock Absorber
 Hobbs Storage Battery Corporation, Hobbs Storage Batteries
 International Sales Co., Gates Half-Sole Tires
 Kaufman & Stone, Spotlights
 Lichtenberger-Ferguson Co., Norwalk Tires
 London & Lancashire Fire Ins. Co. (Rule & Sons, Agents),
 Insurance
 Luard-Tetzlaff, Automobile Repairs
 Los Angeles & Salt Lake Railway, Literature
 M. & H. Novelty Co., Gear-Shift Extension & Tire Lock
 M. & M. Oil Co., Oils and Greases
 Miller Carburetor Sales Co., Miller Carburetors
 Moore, Leslie E., Inc., Lemco Auto and Camp Products
 Nitrolene Sales Co., Nitrolene Oil, Windshield Cleaner,
 Affinity Spark Plugs
 Pacific Ball Bearing Co., Ball Bearings
 Pacific Rubber Co., Horseshoe Tires
 Panama Lubricants Co., Varnishine, Pennzoil
 Pacific Auto Sales Co., L. & B. Truck Attachment, Corser
 Carburetor
 Presto Cloth Mfg. Co., Presto Cloth
 Puente Oil Co., Oils and Greases
 Richfield Oil Co., Oils and Greases
 Safetyford Starter Co., Ford Starter and Accessories
 Savage Tire Corporation, Savage Tires
 Smith-Booth-Usher Co., Automobile Machinery
 L. Sonneborn Sons, Inc., Oils and Greases
 Specialties Mfg. Co., Vulcanizers' Materials
 Sterns Tire & Tube Co., Puncture-proof, Blowout-proof tubes
 Strifler & Shannon, Tire Carriers
 Tire Construction Co., Tires
 Tractor Train Co., Auxiliary Transmission and Special Ford
 Brake
 United States Spring Co., Automobile and Truck Springs
 U. S. Air Compressor Co. of Cal., Air Compressor
 Western Auto Electric Co., Connecticut Lights and Willard
 Batteries

ever, and Southern California in particular, had received the first crude and unbeautiful attempts of the automobile makers with an enthusiasm matched in no other part of the country. The local industry in motor cars was just beginning to lengthen its stride out of a crawl in 1907 and was checked but little by the hard times period that suddenly set in toward the end of the year. Thirty-six dealers brought together fifty-one makes of cars under the roof of Morley's Rink on Grand Ave., in February, 1907. In the list of exhibitors appear names that would ring unfamiliarly to all but the old-time automobile men, such as Acme, Aerocar, Christman, Dolson, Duro, Elmore, Grout, Lambert, Marvel, Mora, Northern, Pierce-Racine, Queen, St. Louis, Tourist, Waltham, Orient and Wayne. Net profits of \$8,000 out of the receipts satisfied the show management that an annual motor car show would henceforth prove a profitable detail in the career of the automobile industry in Southern California.

The majority of the car dealer firms of ten years ago were located along Main street between Eighth and Washington streets. That the trend to the southwest, however, had already set in, is found in a 1907 issue of Motor West: "Automobile row is gradually moving

southwest. A short time ago there were few garages south of Tenth street; now there are many, and in another year there will be a big bunch south of Pico."

Going Back to Early Days of Industry.

In the year 1895 newspapers and magazines carried stories from abroad regarding the remarkable success the French were achieving in building self-propelled vehicles, called automobiles. There was a bicycle dealer in Los Angeles at that time by the name of W. K. Cowan and the description of the "Horseless carriages" filled him with more than a passing interest. "If I can ever get hold of any of those things, I'm going to sell them here in Los Angeles," Cowan declared to his family. That was the inception of the automobile business in Los Angeles. In the year 1899 Mr. Cowan did get hold of one of those things, and sold it, and the automobile business was born in this city.

Whether Mr. Cowan dreamed at the time he made his initial sale that the single transaction of that day, would eighteen years later develop into an annual business of upwards of \$20,000,000, that more than one Los Angeles distributor would count his yearly sales by thousands, and that the new industry would utterly transform the transportation problem is hard to say. At any rate he was the first Angeleno with vision to see that there were possibilities in the automobile business. And if confirmation of his wisdom were needed, anyone may receive it by visiting the Billy Sunday tabernacle and inspecting the wonderful display of motor cars that will be on exhibition there from November 12th to 17th.

There was no section of the entire United States that more enthusiastically welcomed the automobile than did Southern California. As Former Ambassador Gerard told a Los Angeles audience, the United States was settled by people who were dissatisfied with things in Europe, and that California was settled by people who were dissatisfied with things in the East. Therefore it was only natural that to a people least content with the existing order of things the new method of transportation appealed with unusual force. The West has ever been noted for a readier acceptance of things that were new than the more conservative East, and Southern California in particular welcomed the automobile like a boy welcomes a new red wagon on Christmas morning.

Of course the fact that automobiling was a pleasure all the year round had something to do with it, but aside from this there was another reason. The Southwest is a land of magnificent distances, and its inhabitants welcomed an invention that could annihilate them. And the pioneer automobile dealers of Los Angeles were not content to drive their wares cautiously around the best roads they possessed; they fiercely attacked their mountains and their deserts. Over a trackless desert they raced from Los Angeles to Phoenix; they urged their wheezing chariots over the heart-breaking Baldy race course; they performed such prodigies of endurance as driving a single-cylinder car in a non-stop run from Los Angeles to San Francisco. To the early dealers of Los Angeles who set about in such a whirlwind fashion to demonstrate the practicability of the one-and-two-lungers of those pioneer days, the automobile business of the West owes a lasting debt of gratitude.

Such conservatism as there was in the Southwest regarding automobiles was scattered to the winds by these



Photo by Hughes

(1) Huge assembly plant of the Ford Motor Co. (2) Salesrooms of the Howard Automobile Co., representing the Buick. (3) Willys-Overland building is one of the finest in Los Angeles. (4) Architect's drawing of the new building of the Leach Motor Car Co.—Premier, Liberty, Dort, King. (5) Reilly Motor Car Co.—Moon. (6) Lord Motor Car Co.—Maxwell and Velie. (7) Los Angeles quarters of Don Lee, who represents the Cadillac. (8) Motors Distributing Co.—Roamer. (9) Earl C. Anthony, Inc., agents for the Packard and Reo. (11) Where the H. C. McVey Co. handles the Oakland. (12) W. J. Burt Motor Car Co.—Auburn. (13) McFarlan Pacific Co., where the McFarlan and Fiat passenger cars and the Stewart and Indiana trucks are handled. (14) Harold L. Arnold's Olive street quarters, where the Hudson and Dodge passenger cars and the Vim truck are handled. (15) Olive street quarters of the Empire Motor Sales Co. (16) Handsome new building just erected by Harold L. Arnold at Seventh and Grand Ave.

**COMPARISON OF AUTOMOBILE REGISTRATIONS IN
SOUTHERN CALIFORNIA JUNE 30, 1916,
AND JUNE 30, 1917.**

Counties.	Registered June 30, '16	Registered June 30, '17
Imperial	2,262	3,399
Kern	4,414	6,399
Los Angeles	63,137	78,143
Orange	5,410	6,864
Riverside	3,251	4,228
San Diego	7,544	8,987
San Bernardino	5,215	6,404
San Luis Obispo	1,267	1,921
Santa Barbara	3,157	4,354
Ventura	2,098	2,737
Total	97,755	123,436

early achievements. The newspapers chronicled them to such an extent that newspaper automobile sections were born, the first in the United States. The public followed the doings of the famous cars of those days as keenly as they watch the baseball world's series today. Black Bess, Tobasco the First, the Elmore Bull-dog and the Franklin Greyhound each had their hosts of enthusiastic backers. From enthusiasm they graduated to ownership.

Once owners they became boosters for good roads. They realized that the best automobile is at a decided disadvantage on a poor road. Los Angeles County ten years ago passed a bond issue for \$3,000,000 for good roads. How many million dollars worth of automobiles were purchased as a direct result of that bond issue it is impossible to figure, but it is certain that the sales of cars increased by leaps and bounds. Good health unfortunately is not contagious, but good roads are. Other Southern counties passed good roads bond issues, the State of California itself passed bond issues totalling \$33,000,000, and California took rank as one of the foremost state in the Union in the matter of good roads. Los Angeles County alone today has 1099 miles of paved road, and Southern California 2344 miles.

The natural result of such roads is satisfied owners of automobiles. Cars attain mileages that are enormous without showing signs of excessive wear. Tires give service that in the East would be considered phenomenal. Trucks, heavy-duty trucks, cover as high as 80 miles in the course of a day's work. Given a good right-of-way such as Southern California machines possess, and the inherent usefulness of the automobile is immensely increased.

Southern California Ideal Testing Ground.

There is another angle to Southern California usage, however. It presents some angles more difficult than anything the East presents. The State highway from Los Angeles to San Francisco by the Valley route climbs the famous Ridge road, over a 4000-foot summit. The summer heat over this long climb frequently rises above the 100-degree mark. It is a test of cooling ability rather more excessive than anything to be had around Detroit, and as a consequence Eastern engineering theory has sometimes had to be revised to meet the facts of California practice. More than one of the best Detroit factories has awakened to the advisability of using Southern California as a testing ground for their new models.

The same lack of conservatism that led Southern Californians to quickly adopt the use of the automobile, early gave them a discontent for the standard colors, the standard bodies and the standard tops of the regular product

of the Detroit factories. Nowhere in the United States are there to be seen as many smart special bodies, tops and new startling color schemes as on the automobiles of Los Angeles. The big movie colonies of Los Angeles and Hollywood have done their part in this crusade against the commonplace. Of a more or less temperamental disposition, the average movie star exhibits his temperament by driving a car that is decidedly different. Upholstered in flowered chintz, glittering with plate glass, and camouflaged with Apache red, ocean green, Aurora Borealis pink or some other modest shade of color, the car of the movie actor would unquestionably never be recognized by the modest Detroit factory that gave it birth. Nevertheless, a careful study of Los Angeles styles would do much to improve many Detroit designers' ideas, and more than one smart motor fashion has originated in the shops of Los Angeles.

Since Southern California has admittedly developed a distinctive style of architecture for her homes to meet the out-of-door possibilities of her climate, it is only natural that the Southern California motor car owner should develop a style of motor design to meet his needs. The smart victoria top is nowhere in greater evidence than on Los Angeles machines, and from the tiny port-hole effect of plate glass in the side and back, the newest victoria tops contain large sheets of heavy plate, giving unrestricted view at either side, while the style of the top permits the rear seat occupant to get the benefit of larger quantities of Southern California's well-known climate.

By virtue of the thousands of wealthy Eastern visitors who spend their winters in the fashionable colonies of Beverly Hills, Oak Knoll, Orange Grove avenue and Montecito, it is probable that the upper-crust of ultra-fashionable and ultra-expensive motor cars is rather thicker in Southern California than in any other portion of the country outside of New York. And the size of the motor market that the ten southern counties of the Golden State presents is best evidenced by the fact that there are in operation in Southern California no less than a hundred million dollars' worth of motor cars. The state registration lists at the close of June, 1917, show a total registration of 123,436 automobiles in the counties of Imperial, Kern, Los Angeles, Orange, Riverside, San Diego, San Bernardino, San Luis Obispo, Santa Barbara and Ventura. Figuring an average value of \$800 per car, this gives a total of \$98,748,800 worth of motor cars, and the sales in the four months since at the customary rate, would easily bring the total well past the hundred million mark. To meet the demands of the public that has invested this huge sum in quick transportation, there are established in the

**CAR DEALERS, ACCESSORY DEALERS, GARAGES AND
REPAIR SHOPS IN SOUTHERN CALIFORNIA.**

Counties.	Car Dealers.	Accessories Dealers.	Garages & Rep. Shops.
Imperial	21	31	19
Kern	21	43	27
Los Angeles	316	542	369
Orange	56	61	48
Riverside	29	53	44
San Diego	46	87	58
Santa Barbara	34	41	28
San Luis Obispo	11	22	16
San Bernardino	51	67	38
Ventura	27	46	31
Totals	612	993	678



Photo by Hughes

(1) Present plant of the Moreland Motor Truck Co., to be continued after new Burbank plant is occupied. (2) Home of the General Vehicle Electric Truck. (3) Quarters of the Smith Form-a-Truck Co. (4) Where the Autocar Truck holds forth. (5) Home of the Little Giant Truck. (6) Factory branch of the Wichita Falls Motor Co., makers of the Wichita Truck. (7) Headquarters of the Mack Motor Truck Co., representing the Mack and Saurer Trucks. (8) Home of the D. F. Poyer Truck Co., Southern California representatives of the Republic Truck. (9) Where F. G. Sinsabaugh handles the Menominee and Gramm-Bernstein Trucks. (10) New building of H. G. Pendell, who represents Denby, Winther and Koehler Trucks. (11) Where Olds, Banta & Smith handle the Ralston Truck attachments.

ten counties, 612 automobile dealers, 993 motor accessory dealers, and 678 garages and repair shops.

With an automobile to every eleven persons in this favored territory it would seem to a person of pessimistic tendencies that the automobile market would be narrowing in Southern California. The reverse seems to be true, however, and from the steadily increasing registration figures it is evident that the much-discussed "saturation point" in Southern California at least, must be only another name for the "vanishing point."

The real reason for this condition of affairs is unquestionably largely due to the good roads of Southern California. The thousands of miles of perfect road that gives the Eastern visitor a new idea of the pleasures that can be extracted from the ownership of an automobile bring yearly a host of motorists from less-favored communities in the East. Last winter Alfred G. Reeves, manager of the National Automobile Chamber of Commerce, visited California and bore enthusiastic witness to this statement in an address to the Los Angeles motor car dealers. Reeves motored from San Francisco to Los Angeles in two days, covering 187 miles to Fresno the first day and the remaining 260 to Los Angeles the second.

"I never take a trip of such length in a single day in the East," declared Reeves, "for the simple reason that it is so exhausting that it leaves me unfit for work for two or three days afterward. Yet it is a fact that the 260-mile drive from Fresno to Los Angeles did not leave me tired at all. I believe that I could drive the entire distance from San Francisco to Los Angeles at a sitting without being seriously fatigued. Your wonderful California boulevards certainly give a new meaning to long-distance touring and a vastly added usefulness to the automobile." And Reeves declared that he intended to make every effort to make another visit to California this season.

Once a Southern Californian owns an automobile, he will always own one. Rather than be deprived of a car he will sacrifice any other luxury, and—whisper it—some necessities. Every adult Southern Californian is an ultimate prospect, and nurses an ambition to own at least one automobile. Every added mile of good roads built is an added incentive to own a car. Every "Motor West" touring story that chronicles in detail the delights of motor-ing to the beaches, the hills or the high Sierras is a new reminder that life in Southern California is hardly worth living without a car. In the 12 months from June 30, 1916, to June 30, 1917, the residents of Los Angeles county alone bought 18,319 motor cars, as the state registration increase shows. In Southern California the new cars registered during the same period totaled 25,681. Actually the sales were probably considerably in excess of this, for many large wrecking establishments in the city of Los Angeles conduct profitable businesses dissecting old cars and selling the more valuable portions of their anatomy. The current year will probably see 20,000 new buyers of cars in Los Angeles county, and a great majority of this number will wander down the aisles of the automobile show during the coming week.

Although it does not hold a particularly high position in the ranks of automobile manufacturing cities, Los Angeles promises in the very near future to become the greatest motor truck producing center west of the Mississippi River. The completion of the immense new plant of the Moreland Motor Truck Co. at Burbank and the

factory branch of the Republic Motor Truck Co. at Vernon—both suburbs of Los Angeles—will add much to the importance of the Southern California metropolis in this respect. The plant of the Kimball Motor Truck Co. is also growing, while a half-dozen firms are engaged in the building of truck attachments.

Passenger automobiles are assembled in Los Angeles in large numbers by the Ford Motor Co., whose huge plant was erected here to meet the heavy demand from the Southern California district. The Homer Laughlin Engineers' Corporation is building a front-drive car, and at Culver City, a suburb, is located the pioneer miniature motor car plant in this country, where the Culver toy car is built.

It is as an accessories manufacturing center, however, that the Los Angeles district is making such pronounced progress. Many of the devices turned out here have acquired national reputations, such, for instance, as Hobbs batteries; Corser, Ensign, Master and Miller carburetors; Silverbeam and S & M lamps; Miller motors; Auto Theft Signal; Damon, Lusterall and Varnishine polishes; Martin shock absorbers; Cambria and United States springs; G. L. W. spring oiler; Savage and Hendrie tires; L. & B. auxiliary transmissions; Windshield Cleaner device, and numerous others.

The following table shows the number of firms engaged in the manufacture of automobile accessories in the Los Angeles district on the 1st of January of the present year, the figures being furnished by the Los Angeles Chamber of Commerce:

Makers of	No. Firms.	Makers of	No. Firms.
Ball Bearings	3	Tires and Tubes	2
Bodies	42	Tires reconstructed	3
Brakes	3	Tops	29
Bumpers	2	Tractor attachments	2
Curtain windows	2	Trailers	6
Heel protectors	1	Truck attachments	6
Ignition	6	Turn-table	1
Parts	1	Wheels	9
Radiators	17	Windshields	4
Rubber sundries	3	Crude oil and distillate	16
Self-starters	3	Fuel oil	4
Supplies and sundries	48	Lubricating oil	11
Total			224

Los Angeles is famous for the quality and style of the bodies and tops turned out by its manufacturers. There are no fewer than 42 firms which make a specialty of body work, while there are 29 individuals and companies specializing on tops. In the fuel and lubricating oil and oil well supply business Los Angeles stands pre-eminent among the Pacific Coast cities. It is the center of the great California oil fields, and gasoline and lubricants may be procured more cheaply in this section than possibly anywhere else in the United States—a not inconsiderable factor in Los Angeles' pre-eminence as a motor-ing center.

The following new manufacturing enterprises connected with the automobile, automobile accessory and allied industries have been started in Los Angeles, during the first six months of the present year: Strifler & Shannon, automobile tire carrier; Windshield Cleaning Device Co., windshield cleaner; Los Angeles Auto Tractor Co., tractor attachments; Morgagni Auto Body Works, automobile bodies; Los Angeles Motor Car Co., tractors; Steemo Co., automobile attachments; E. L. Langbein, truck attachment; Auto Top & Body Works, automobile tops and bodies; United Motors Co., truck

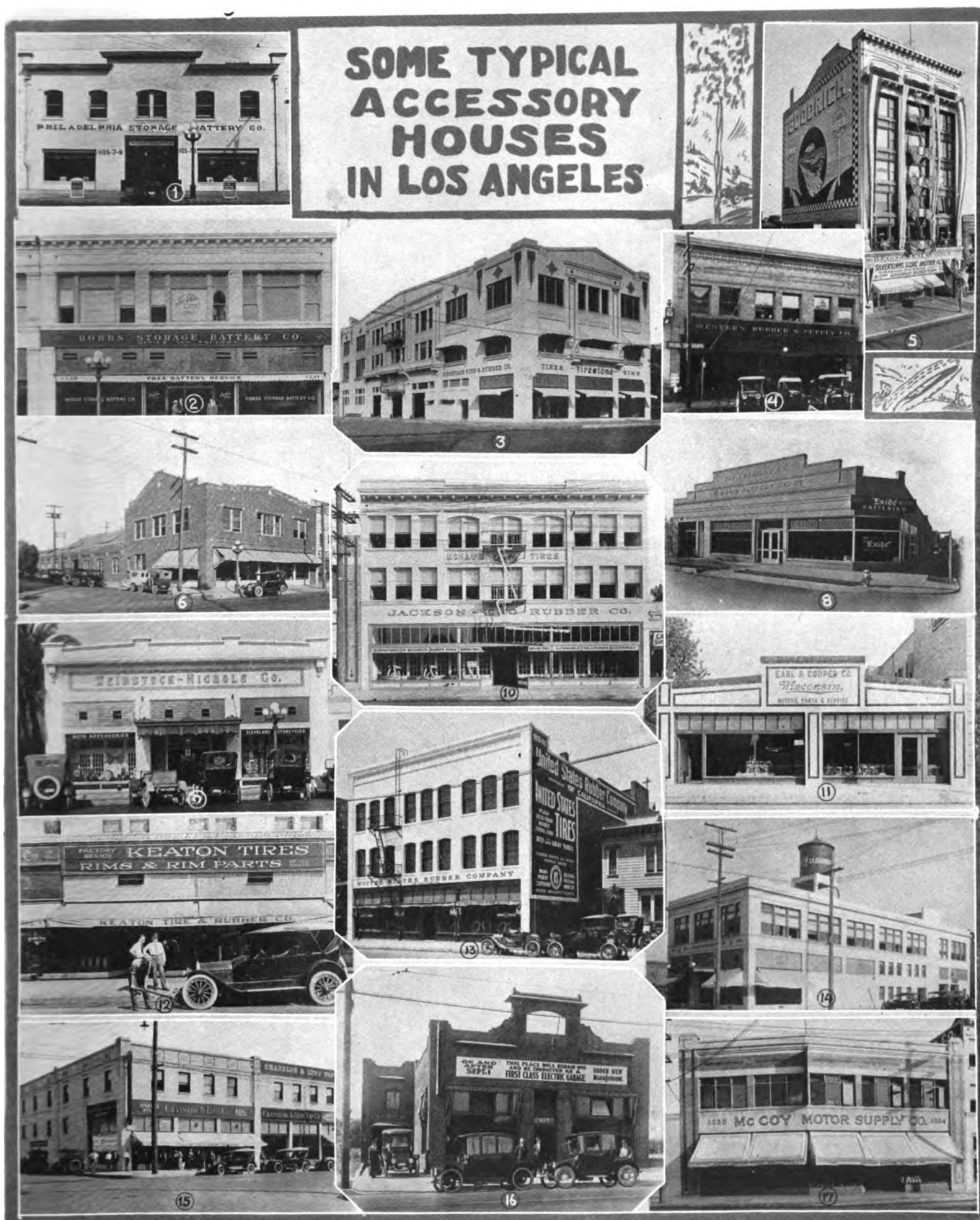


Photo by Hughes

(1) Home of the Philadelphia Storage Battery Co. (2) Office and factory of Hobbs Storage Battery Co., a Los Angeles concern. (3) Firestone Tire & Rubber Co.'s new branch. (4) Western Rubber & Supply Co. (5) Home of the Goodrich Silvertown Cord Tires. (6) Diamond Auto Works. (8) Kay & Burbank Co., Exide Battery Depot. (9) Weinstock-Nichols Co. (10) Jackson-Eno Rubber Co. (11) Where Earl Cooper handles Wisconsin motors. (12) Factory branch of Keaton Tire & Rubber Co. (13) United States Rubber Co. of California. (14) E. A. Featherstone's new establishment. (15) Chanslor & Lyon's accessory house and top factory, largest of its kind on the Pacific Coast. (16) Lord & Pierce's electric garage and accessories house. (17) Los Angeles home of the McCoy Motor Supply Co.

attachments; M. & H. Novelty Co., gear-shift levers; Specialties Mfg. Co., vulcanizing devices; Specialty Engineering Co., gasoline mixer; Cedarwax Co., body polishes; Economy Trailer Co., automobile trailers; Kramer Starter Co., automobile starters; Zahn Mfg. Co., automobile tops; King Body Polish Mfg. Co., polishes; M. & M. Oil Co., lubricating oils; Hafner-Hock Auto Works, automobile bodies; Hodge Oil Co., lubricating oils; Perfection Auto Window Co., curtain automobile lights; and Parker Rustproof Co., to rust-proof metals.

116 Models Listed for Denver's Annual Show

The Denver Automobile Association Show Committee has decided to bar everything of a freak nature in the Motor Car Division, and the Accessory Division, during its annual exhibition, November 12th to 18th, in the huge local Auditorium. Only standard cars of different styles will be shown. The following lines will show from one to six models: Willys-Overland Co., Willys-Overland; MacFarland Norton Co., Buick; Cadillac Motor Co., Cadillac; Tom Botterill, Inc., Pierce, Hudson, Dodge; W. W. Barnett, Oldsmobile; E. J. Johnson, Premier, Chalmers; Mountain Motors Co., Packard; G. W. Linger, Mitchell; Platt Fawcett Motor Co., Paige; F. C. Cullen, Cole, Franklin, Studebaker; Roberts Automobile Co., Marmon; Carter Motor Co., King, Saxon, Liberty; Exchange Motor Co., Chevrolet, Dort, Grant; Miller Ray Motor Co., KisselKars, Maxwell; Apperson Motor Co., Apperson; Ford Motor Co., Ford; J. S. Morrison Auto Co., Oakland; Dan B. Southard, Locomobile, Mercer; A. T. Wilson Auto Co., Standard Eight; H. H. Heiser Co., Velie; Merrick Motor Co., Marion-Handley, Crow-Elkhart; L. E. Kelton Motor Co., Haines; H. J. Hannon, Scripps-Booth; Colorado Motor Co., Reo; Mulnix Auto Sales Co., Monroe; Geo. H. Estabrook, Hollier, Briscoe; Moore Hardy Co., Stephen Six; National Motor Co., National; Lexington Auto Co., Lexington; Maxwell Chamberlin, Peerless; J. L. Armstrong, Winton; Jackson Motors Co., Jackson; I. B. Humphreys, F.I.A.T.; Detroit Electric Co., Detroit Electric; S. B. I. Motor Sales, Hupmobile; White Automobile Co., White; Ross Motor Co., Yale, Colonial.

Fifty-one different makes of motor cars—one hundred sixteen models in all—will be shown. Several limousines and town cars, special jobs costing \$10,000, will be the features of the enclosed car class.

Plans are being made to hold a convention of all men interested in the automobile industry, in its various branches, in Denver during the show. A large group consisting of prominent automobile men in all sections of the state are working on a committee to organize a State Automobile Trades Association at this convention, for the benefit and advancement through co-operative action, of the automobile trade, and for the elimination of existing evils of the industry. The program contemplates instructive talks by men prominent in the State in large industries which have a bearing on the automobile business. The convention will be held during the mornings of the 12th, 13th, and 14th, the show hours being in the afternoon and evening.

Automobile Salon Dates Announced

The 1918 Automobile Salon will be held in the grand ballroom of the Astor, New York, from January 2 to 9,

inclusive, and in the Elizabethan room of the Congress, Chicago, from January 26 to February 2, inclusive.

The following officers were elected for the coming year: E. Lascaris, De Dion Bouton, president; Thomas E. Adams, Lancia, and Leon Rubay of the Rubay Co., vice-presidents; Robert W. Schuette, Rolls-Royce, secretary-treasurer.

Space has already been taken for exhibits of the Rolls-Royce, White, Lancia, Locomobile, Simplex, Brewster, Daniels, Fergus, Murray, Cunningham, and Biddle cars. Brewster, Rubay and Brooks-Ostruk have also taken space for body exhibits.

300 Accessory Exhibitors at the National Shows

The Show and Allotments Committee of the Motor and Accessory Manufacturers has allotted space at the New York and Chicago national shows to 109 members of the association, the majority of whom will exhibit at both exhibitions. By the time S. A. Miles, manager of the two shows, allots space to the accessory concerns not members of the M. & A. M., the total number of exhibits of accessories will reach close to the record mark of 300. The members of the organization had to be content with much smaller space than they had asked for because of the great demand.

Accessories Show Dates for 1918 Already Fixed

The date of the second annual Fitment Exposition for 1918 has already been set. It will run six days from September 23 to 28, inclusive, and will be an exhibition for all forms of automobile equipment instead of only Ford accessories, as this year. The company promoting the event is to open permanent offices in Chicago and from these offices will promote like events in other cities. Any idea that such an event might fail has now been given up, for the success of the Chicago venture was greater than had been anticipated.

Thrills Galore at Utah State Fair Races

Six thousand persons jammed in the grandstand and bleachers at the Utah State Fair half-mile track on Oct. 4th, saw a fifty-mile dealers' stock car automobile race which was replete with thrills; a race in which the drivers drove "for blood," there being many side bets in addition to the \$500 purse offered by the Fair association.

The thrills consisted of three accidents, one in which a big Packard 6-38, driven by C. D. Sprague, blew out one tire, rolled two more and turned a complete summersault. The others occurred when the Packard rammed a Chevrolet racer driven by G. W. Moody and ripped off a rear wheel and when "Bud" Bodell's Paige suffered steering gear trouble, blew a tire and went into the fence. With the exception of a broken hand suffered by Sprague, no one was hurt.

The Cole 8, driven by H. P. Federspiel, finished first in 1 hour, 6 minutes and 47 seconds. Harry Eaton's Locomobile finished second and Bodell's Paige third, the other two cars being out of the race.

Los Angeles, Cal.—John T. Dye, pioneer used car dealer, will double his floor space by taking over the remodeled old church building at Pico and Flower Sts.—Max Schiffer of the Tire Co. of California has opened new quarters at Eighth and Olive Sts.



ELGIN SCOUT CAR ON ITS ARRIVAL IN CHICAGO.

Elgin Scouts Start on Last Half of 12,000-Mile Tour

When the Elgin Six National All Trails Scout Car reached St. Louis, October 6, en route east along the National Old Trails roads, the scouts decided to detour to Chicago and break the seals which had been officially placed on August 4 by Charles M. Hayes, president of the Chicago Motor Club. At the time of the breaking of these seals on the hood, transmission and differential, the car had covered 6,128 miles. It was found that little overhauling was necessary to prepare the car for another 6,000-mile journey. The only reason for breaking the seals was the fan belt, which separated at the joining when the scouts were in Arizona. The car was driven through the far western country, where temperatures ranged up to 130 degrees, without a fan belt, and performed splendidly. The general average of gasoline used for the more than 6,000 miles was $19\frac{1}{2}$ miles to the gallon.

The journey was resumed upon their return to St. Louis, whence they went eastward to Washington to report to Secretary of War Baker, and thence to New York to cover the Lincoln Highway to Chicago, after which their journey will be over the Dixie Highway via the western route to Miami, Fla., and return through Detroit via the eastern route of the highway.

Uncle Sam Wants Men for "Army Behind the Army"

The Enlisted Ordnance Corps, National Army, into which the Ordnance Enlisted Reserve Corps has been merged, is charged with the supply, maintenance and repair of all cannon and artillery vehicles and equipment; all machines for the service and maneuver of artillery; all small arms, ammunition, harness, motor trucks, motorcycles, tractors and railroad cars; in fact, it is the Army behind the Army commonly known as "Service of the Rear."

There is a place for practically every man who knows a trade in the Enlisted Ordnance Corps. Machinists, painters, automobile mechanics, saddlers, blacksmiths and wheelwrights are among those especially needed at this time.

Applicants must be between 18 and 40 years, citizens or declarants, and be able to speak, read and write the English language, should have no absolute dependents, and must

be able to pass a physical examination conforming to that prescribed for the Regular Army.

If accepted for enlistment, men will ordinarily be sent to an arsenal school for a period of instruction, on completion of which they will be assigned to detachments, units or organizations, with ultimate service abroad. Previous military training, while preferable, is not essential, as men will continue the work which they pursue in civil life.

In view of the importance of their work a large number of men will serve as non-commissioned officers. Original enlistment is required as private, but later courses of training or special qualifications quickly lead to higher grades. Pay ranges from \$30 to \$97.20 a month, depending upon demonstrated ability and place of service. Men are enlisted for duration of war only. Free quarters, rations, clothing, bedding, medical attendance, etc., are provided.

Men registered under the Selective Service Law may voluntarily enlist prior to the posting of their names by their local boards. No man who has been called to appear for physical examination is eligible for enlistment in any branch of the military service. In case such men do enlist the department under which they have enlisted will be requested to discharge them and direct them to report to their local boards.

Application blanks may be secured by writing to Chief of Ordnance, Enlisted Personal Division, Washington, D. C. Fill out, return to Chief of Ordnance, and if there is an opening at the time, authorization will be sent the applicant to enlist at the nearest recruiting station, and if accepted there, free transportation will be provided to place of service.

Arizona Leads in Cotton Crop Percentage Increase

The latest Government crop estimates indicated a 1917 cotton yield for the whole country of 60 per cent, which promises a total crop of about 12,000,000 bales—600,000 more than last year, but 4,000,000 less than three years ago. The highest announced estimate for any state was that covering Arizona—87 per cent. Cotton growing activities there are confined largely to the big plantations of the Goodyear Tire & Rubber Co., near Phoenix and Mesa. This company is growing the long-staple Egyptian grade which has been found best suited to the manufacture of tires.

Providing that a strong entry card can be arranged for, Ascot Speedway, Los Angeles, will again be the scene of a Thanksgiving Day race this year, according to George R. Bentel, chairman of the speedway committee. "Rather than give mediocre races we preferred to keep the speedway closed this winter," says Bentel. Telegrams have been received from the East telling of the shipment of several racing cars for Los Angeles and several well-known drivers are reported to be on their way to the Pacific Coast.

Peerless Engineers Favor California Asphalt-Base Oil

Further recognition for motor oil made from California asphalt-base petroleum was brought to light recently when a letter from the Peerless factory stated that after testing several kinds of oil, the technical department was able to secure uniformly better results with a motor oil made here on the Pacific Coast from California asphalt-base petroleum, than from any of the oils which they tested.

Motor West

LOS ANGELES-SAN FRANCISCO-PORTLAND-SEATTLE

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Established 1907.

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November 1, 1917

Los Angeles, the Motor Mart of an Empire

THE ADVENT of the Seventh Annual Show of the Motor Car Dealers' Association of Los Angeles calls attention to the fact that the metropolis of Southern California is the automobile and accessory distributing point for a territory larger in extent, and with more purchasing power, than many entire States in the East and the Middle West. Not a few foreign monarchs control a smaller area than do Los Angeles' automobile tradesmen. From San Luis Obispo and Visalia on the north to the Mexican line on the south, and from the Pacific to the eastern boundary of Arizona, automobile and accessory dealers in cities, towns and villages in this immense territory are dependent upon the Los Angeles distributors for their goods.

To Los Angeles, therefore, the motor-wise of the territory mentioned will journey, just as the denizens of the East travel to New York at the time of the National Show there, and as the Middle Westerners brave the chill blasts of Chicago to familiarize themselves with the latest motor fashions at the annual exhibition in the Windy City.

To all the Southwest the annual Los Angeles show is the clearing-house where the latest ideas in Motordom may be seen; where the sub-dealer will make new connections or cement old ones; where the car owner will select his choice for the coming year; where the "prospect," with real money in his pocket, will embrace the opportunity of inspecting the whole line-up before making his selection; where the manufacturers and sellers of accessories will have the one best opportunity of the year to set forth the merits of their products to the greatest possible number of potential buyers at the least expense.

The Eastern factories will take advantage of the show to send their brightest representatives to the Coast, knowing that the Los Angeles exhibition will afford them the best opportunity to get into close touch with one of their most promising markets. Makers of cars not yet repre-

sented in this territory will grasp the opportunity to secure reliable dealers; those seeking new representatives know that show time offers them the best chance of making more satisfactory connections. It will be a motor symposium well worth while for everyone concerned.

While it is to be regretted that Los Angeles does not yet possess a building that will provide an adequate setting for the 1917 show, the promoters were fortunate in being able to secure the Billy Sunday Tabernacle, which, while rough within and without, has, under the deft hands of the decorators, been transformed into a veritable fairyland. Despite its hugeness, however, the committee found it necessary, in order to provide room for the multitude of exhibitors who clamored for space, to erect several large tents on the block of ground on which the Tabernacle is located.

Despite the war conditions that have prevailed for the last half year, the increase in registrations for the Los Angeles territory has been normal, the first six months of the present year showing totals for the ten southern counties of California of 123,436, as against 97,755 for the corresponding period of 1916. Money is more plentiful now in this section than it was a year ago, and prospects for continued prosperity are excellent. Ranchmen and miners are exceptionally prosperous, high prices for their respective products having been the rule for the past two years. Bank clearings and building permits—both excellent indices of the prosperity of a community—show remarkable increases over last year.

A census of the automobile activities of the territory which is directly dependent upon Los Angeles—i.e., Southern California—shows that there are now engaged in business in this section 612 dealers in motor cars, 933 dealers in accessories and 678 garages and repair shops. As a manufacturing center, for accessories especially, Los Angeles city is beginning to make its mark. A recent tabulation of the number of firms engaged in making such motor needfuls as bearings, bodies, brakes, bumpers, radiators, self-starters, tires, tops, trailers, truck attachments, wheels, windshields, lubricants and other supplies and sundries, etc., shows that no fewer than 224 are doing business at the present time, and that the value of their products annually mounts far into the millions.

Los Angeles' pre-eminence in the motoring activities of the Pacific Coast will be well demonstrated at the present show, which, the managers claim, will far outclass any similar exhibition ever held on the Pacific Coast, both in the way of attendance and for the quality of the exhibits.

Automobile Makers Endorse Military Highway Bill

The Board of Directors of the National Automobile Chamber of Commerce has endorsed the Chamberlain-Dent bill recently introduced in Congress, which provides for preparation by the War Department of plans for, and the construction and maintenance of, a continuous military highway along or near the Atlantic and Pacific seacoasts and along the southern border of the United States.

Horace DeLisser, head of the Ajax Rubber Co., has been appointed to the Business Men's staff of General Pershing, and will have the rank of major and help construct 15 miles of factories behind the fighting lines in France to furnish the army with field equipment which can be manufactured abroad more expeditiously than it can be imported.

"Don't Waste Gasoline"

Campaign Inaugurated by Automobilists, in Conjunction with Bureau of Mines, to Conserve Precious Fuel

ALL authorities agree that there is an ample supply of crude oil for all the needs of the army and navy, for the operation of motor vehicles and motor boats and for use in the industries, provided waste is carefully avoided, the automobilists of the country, in co-operation with the Petroleum Division of the United States Bureau of Mines and the Council of National Defense, are organizing a "Don't Waste Gasoline" campaign.

According to the estimate of the Petroleum Division, 959,000 gallons of gasoline a day will be required for the use of the army, navy and aeronautical operations during the coming year. The total daily gasoline production is 6,849,000 gallons, and with a campaign against waste, all war needs should be easily cared for and ample gasoline remain for all industrial needs.

The very highest grade of gasoline is necessary for the thousands of airplanes now building, most of which will use the new Liberty motor, now building in great numbers in the automobile factories. Great quantities of gasoline will also be required to operate the thousands of army motor trucks to be used by our growing army.

On the other hand the production of crude oil in this country has been increasing at a tremendous rate for a number of years, although during the past 12 months it has not quite kept pace with the demand, so that it has been necessary to use quantities of the reserve supply, which amounted to 164,580,000 barrels on July 1, 1917.

Co-operating with the National Automobile Chamber of Commerce in this movement are the American Automobile Association, the organization of users; the Motor and Accessory Manufacturers, including the motor and carburetor makers; and the Society of Automotive Engineers. In direct co-operation are Van H. Manning, Chief of the Petroleum Division of the United States Bureau of Mines. If two-thirds of all the gasoline wasted can be saved, our war needs will be covered.

There are 4,212,000 motor vehicles running in the country, of which approximately 400,000 are trucks. There are 27,800 dealers and 25,500 garages.

Of the 6,849,000 gallons produced daily, approximately 4,800,000 gallons are used by motor cars and trucks, while the rest is used by motor boats, stationary engines and in cleansing and other industries.

The Bureau of Mines estimates that the following savings can be effected daily:

	Gallons.
Tank wagon losses	7,200
Leaky carburetors, av. 1/17th of a pint per car	33,400
Poorly adjusted carburetors, 1/2 pint per car	240,000
Motors running idle, 1/4 pint per car	150,000
Wasted in garages, 10 pints per day	67,000
Saved by using kerosene in garages	108,000
Needless use of passenger cars, 1 3/4 pts. per car	897,400

This makes a total of 1,500,000 gallons a day, or 561,000,000 gallons a year, whereas our war needs are 350,

000,000 gallons a year, or less than two-thirds of what may be considered as wasted at the present time.

There are now being prepared thousands of posters to be hung in every automobile salesroom, garage and gasoline supply station in the country. These posters will show, graphically, the quantity of gasoline produced daily, the quantities used in motor trucks and motor cars, and the quantities that can be saved in various ways.

The following important suggestions for avoiding waste will not only save gasoline, but users of motor vehicles will be benefited personally and individually through more efficient and more economical operation of cars:

Store gasoline in underground steel tanks. Use wheeled steel tanks with measuring pump and hose. They prevent loss by fire, evaporation and spilling.

Don't spill or expose gasoline to air—it evaporates rapidly and is dangerous.

Don't use gasoline for cleaning or washing—use kerosene or other materials to cut grease.

Stop all gasoline leakages. Form habit of shutting off gas at tank or feed pipe.

Adjust brake bands so they do not drag. See that all bearings run freely.

Don't let engine run when car is standing. It is good for starter battery to be used frequently.

Have carburetors adjusted at service stations of carburetor or automobile companies—they will make ordinary adjustments without charge.

Keep needle valve clean and adjust carburetor (while engine is hot) to use as lean mixture as possible. A rich mixture fouls the engine and is wasteful.

Pre-heat air entering carburetor and keep radiator covered in cold weather—this will insure better vaporization.

See that spark is timed correctly with engine and drive with spark fully advanced—a late spark increases gas consumption.

Have a hot spark, keep plugs clean and spark points properly adjusted.

Avoid high speed. The average car is most economical at 15 to 25 miles an hour.

Don't accelerate and stop quickly—it wastes gas and wears out tires. Stop engine and coast long hills.

Cut down aimless and needless use of cars. Do a number of errands in one trip.

Know your mileage per gallon. Fill tank full and divide odometer mileage by gallons consumed.

Indianapolis Track Has Apparatus for Testing Cars

Special tanks and means for weighing fuel, together with an acceleration testing device operated by an electric contact attached to one front wheel of a car, comprises the apparatus installed at the Indianapolis Speedway under direction of Chester S. Ricker for carrying out the standard S. A. E. performance test for motor cars. This car performance test, as standardized by the Society of Automotive Engineers, gives accurate data of economy, acceleration and other points which determine the value of a car from the performance standpoint.



Calendar of Coming Events

November 12-17—Annual Show Los Angeles Motor Car Dealers' Association, Harris M. Hanshue, secretary.

November 12-18—Denver, Colo., Annual Show, Auto Trades Association, G. A. Wahlgreen, manager.

January 5-12, 1918—New York National Show.

January 26-February 2—Chicago National Show.

February 16-25—Annual San Francisco Show, Geo. A. Wahlgreen, manager.

March 2-9—Boston Show.

*A.A.A. Championship Award Event.

1920 STYLES FOR 1917

OUR designing and trimming departments have created a top which we have named the "1920", because we believe this style will be in general use here three years from now. It is of the permanent type, built to meet the particular requirements of California, where 90 per cent of all cars are driven the year around with tops up.

THE first "1920" was modeled on a Mercer, chosen because of its beautiful lines. Top and car blend so harmoniously that the grace of the body is continued unbrokenly into the top.

BEAUTY alone does not distinguish this top. It is as staunch as it is attractive. Because of its permanent features of construction it will outlast any of the compromising stock tops.

The "1920" is just another PROOF of our knowing how and doing it first

GEO. R. BENTEL CO.

"WHERE MOTOR STYLES ORIGINATE"

Telephones—Bdwy. 4376; 60027

1015 South Grand Ave., Los Angeles

Remarkable Acceleration Test of Chalmers Car

Under sanction of the American Automobile Association and under observation of H. A. Tarantous, of that organization, a stock five-passenger Chalmers was put through a test of acceleration in New York recently with unusual results in quick pick-up. The purpose was to show how fast the car could gather headway from a standing start; in other words, how quickly it could get away when the traffic "cop" blows his whistle.

On the first attempt the car attained a speed of 12.2 miles an hour in 1.2 seconds time, requiring 25 feet to gather this rate of speed. In 4.4 seconds from a standing start the car was traveling 16.5 miles an hour; in 9 seconds, 28 miles an hour, and in 10.2 seconds, 33.3 miles an hour.

The car used for this official test had no special gearing

and was in every respect identical with the regular run of production at the factory. Joe Dawson drove, and a technical observer was carried as passenger at all times.

THE GRIEF CAR.

By Walt Mason.

Some years ago I bought a car that seemed as slick and smooth as tar. The agent said he'd bet his hat there was no better car than that, and agents, as all people ken, are most reliable of men.

In these glad days of which I treat, I had a place in Easy Street. My purse was never lean or lank, I had a package in the bank; I felt that I could keep a car and never know financial jar. Like many another trusting scout, I had expenses figured out; so much for gasoline and oil, for tires and tubes, mechanics' toil. I thought I knew just what 'twould cost—I thought I knew, and struck a frost.

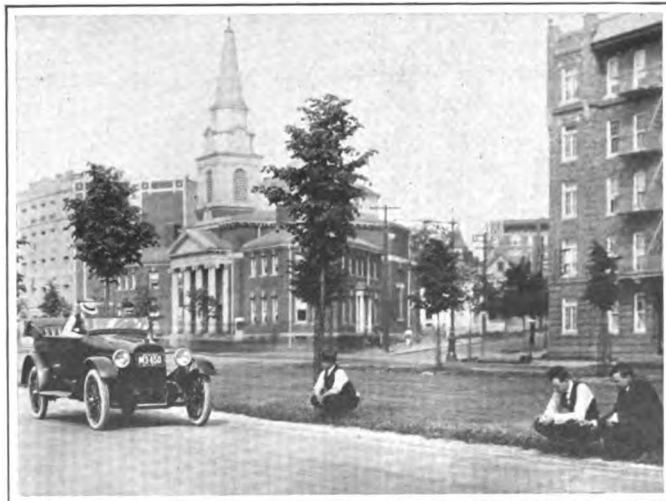
Then came my days of grief and care, of tears and groans and black despair. I never drove that blamed old boat but something seemed to get its goat; the motor always out of whack, the torsion split clear up the back, the oil pump often on the blink, the starter chain would shed a link; if one thing happened to be right, the other thing was in a plight. I used to stand and tear my hair, and weep like everything, and swear, until my wife would say, "Great Scott! Quic handing out that kind of rot! I wish you'd give away that boat, for it is bound to get your goat. You're spending more than you can make repairing that old dizzy fake."

So then I took my wife's advice, and sold it for a foolish price, and used my feet to jaunt abroad, till I had saved another wad.

And then no longer in the hole, I bought a new car with my roll, but now I used my helpful brains and bought myself a Light Six Haynes.

No more mechanics chase along, out to my place, to fix things wrong. I have a car that is a dear; she scoots along, all through the year; she's always ready for a trip whenever I desire to skip; I seldom use my kit of tools; I never rent a span of mules to haul me thirty miles to town, for nothing's ever broken down.

I often hear the housewife say, "You're getting younger every day, from gallivanting o'er the plains—I'm awful glad you got that Haynes."

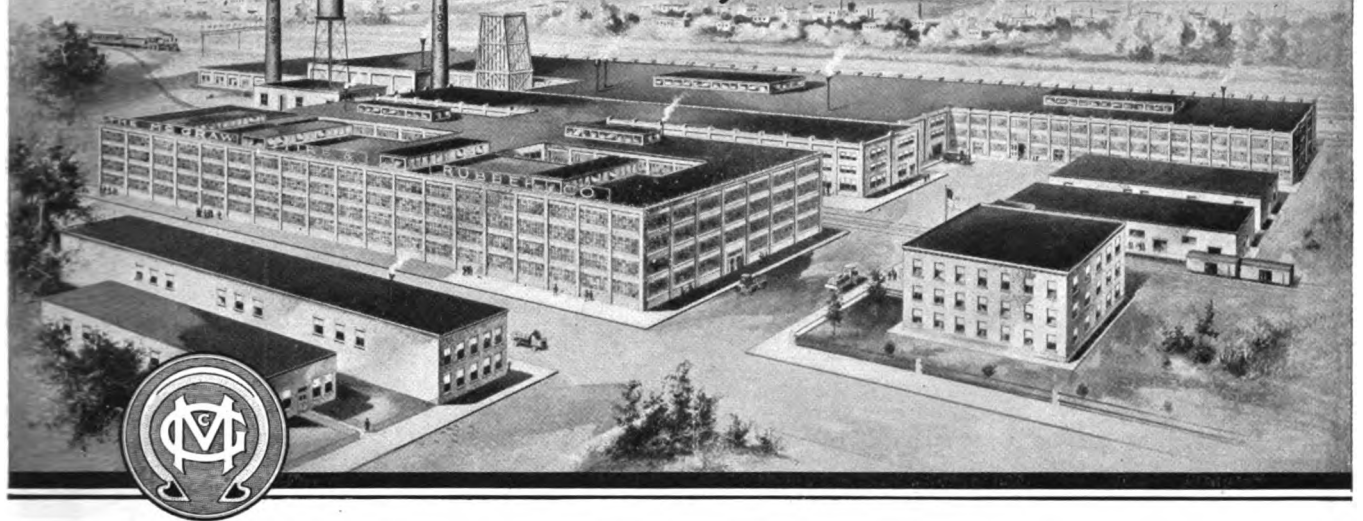


TESTING ACCELERATION PROPERTIES OF CHALMERS CAR—JOE DAWSON AT THE WHEEL.

Mention "Motor West," Please, When Writing to the Advertiser

McGRAW PRODUCTS

Pneumatic Tires • Motor Cycle Tires • Inner Tubes



Facilities

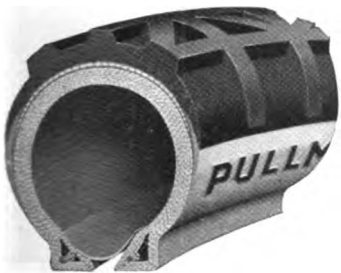
THE McGraw Plant has the size and modern equipment for most economical production. Our warehouses are located to afford immediate service to distributors. Years of experience have developed a broadly efficient field service.

McGraw Products—McGraw, Imperial, Pullman and Congress Tires and Tubes are backed by the resources of a nationwide organization—and sold by several hundred reputable distributors throughout the country.

If you have not done so heretofore, you should investigate the McGraw proposition, which is offered to *wholesale distributors exclusively*.

The McGraw Tire & Rubber Co.

East Palestine, Ohio



Distributing Warehouses • New York • Atlanta • St. Louis • San Francisco

Mention "Motor West," Please, When Writing to the Advertiser

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“Cruising” Across Continent

Noted Yachtsman Fits Up Denby Truck Auto-Cruiser and Travels in Comfort, Regardless of Hotels

ROBT. E. MAGNER, prominent yachtsman of the Pacific Coast, and former commodore of the Seattle Yacht Club, got tired of cruising on the lonesome Pacific. He liked sailing, but the seaboard cities were too familiar to be interesting. So he decided to do some cross-country cruising.

He had been visiting in the East with his mother, sister and nephew, and they decided that going back to Seattle, their home, by rail, was too prosaic. So he built what had long been in his mind, an “Autocruiser.”

For the “power plant and hull” he chose a Denby one-ton chassis, equipped with pneumatic tires and electric starter and lights. On this he had a Boston builder construct the “cabin and galley.” This is the most complete and “ship-shape” arrangement of its kind yet produced. It has sleeping accommodations for four, bath, running water, gas stove, refrigerator, a dresser large enough for the necessary wearing apparel for the four, folding table and chairs, sink, storage space for dishes, silverware and food,—in fact, everything to make a complete home independent of hotels and cities.

There are storage tanks for 60 gallons of water, 40 gallons of gasoline, and two big 100-foot Prest-O-Lite tanks.

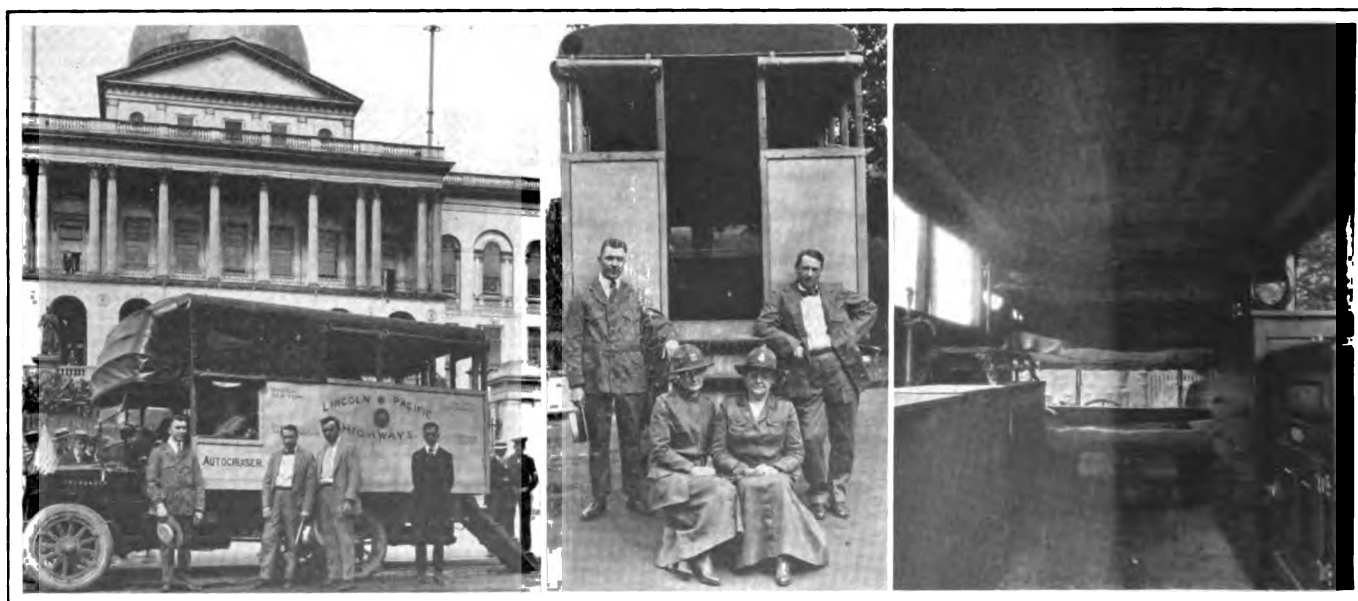
The latter furnishes the gas for the stove and for interior lighting.

Some trouble was experienced in getting a license in Massachusetts, as the vehicle did not conform to the requirements of either commercial or pleasure cars. Finally, a new classification was opened and Mr. Magner holds the only license for an “Autocruiser” ever issued.

In speaking of his craft, Mr. Magner said “It is our idea to be independent of hotels. We have spent every night aboard ship since we left Boston, and will throughout the cruise. There is nothing new about the Autocruiser, simply a combination of auto and ship accessories that have proved good, although more of them came from the ship chandler than the accessory dealer.

“I chose a Denby, because I knew what it was doing on our Western roads and especially because of its high road clearance, and hill ability. The equipment is standard, even to the Goodrich pneumatics. By doing this, I can get anything I need along the way—replacements from the stock of any Denby dealer, tires from any Goodrich branch or dealer, and exchanges for my Prest-O-Lite tanks in any village.

“We are taking our time, seeing the country, free from the necessity of regulating our time to suit time-tables or geography. We camp wherever night overtakes us, do not have to stop for meals; in fact, are as free as the gypsies, and still have the comforts of a yacht. We are going over the Lincoln Highway, with such side trips as our fancy dictates, and then will go down to San Diego and back up the Pacific Highway to our home port, Seattle.”



Denby Auto-cruiser, in which Robert Magner and his relatives traveled across the continent. The party enjoyed all the comforts of home en route. (Left) Ready for the start. (Center) The passengers and crew—Mr. Magner at the right. (Right) Interior of Auto-cruiser, showing “ship-shape” arrangement.



Make Their Own Tracks

When the contractor wants his lumber delivered on a job that is away from paved streets, don't worry about making the delivery—load up a MACK.

MACK trucks are not dependent on the tracks made by others—they make their own. When the pavement ends and the roads grow rough—or there is no road—the indomitable power of the MACK pulls its load steadily through to the job—the MACK gets there.

The McGoldrick Lumber Company of Spokane, Washington, owns a 3½ ton MACK. This truck has already shown profits sufficient to justify the company's replacing horses with the MACK.

The MACK is always a profitable investment—it is so much on the road at little cost. Thorough, durable construction makes the MACK dependable for your service. It has power to deliver your orders easily—and speed to get back quickly for others.

MACK trucks are made in sizes of 1 to 7½ tons capacity; with trailers, to 15 tons. Special bodies can be designed for your individual needs.

Write us for facts of MACK economy.

INTERNATIONAL MOTOR COMPANY
NEW YORK

Los Angeles, Cal., - International-Mack Corp.
San Francisco, Cal., - International-Mack Corp.

Seattle, Wash., - T. G. Young
Portland, Ore., - F. C. Atwell

Performance Counts



See the New Moreland Trucks at the Auto Show

**Our Space is N-70, just to your right
as you enter the Twelfth Street door**

Pay particular attention to the frames on Moreland trucks. In every size, from the 1- to the 5-ton, they are larger than any competitive truck of like capacity we know of.

Investigate thoroughly the power of the motors in Moreland Distillate Trucks. There is no more powerful power plant in any motor truck of like capacity. We install these powerful engines deliberately, because we know that in this western country times arise when what may be termed excessive power is highly desirable.

Note the Moreland Gasifier, a standard installation on every Moreland Distillate Truck. Over 3,000 of these devices are now in use on commercial vehicles bearing the Moreland name, and the owners are burning distillate at one-half the cost, with as high a degree of success in operation as other trucks secure from gasoline.

Note the 4-speed transmission suspended amidship. This, with a proper gear ratio, means power control at all times. No haulage condition can arise that your Moreland truck won't meet.

Note the steel wheels on Moreland Trucks, a feature of prime importance in the western country where wheel construction must be as near perfect as human endeavor can make it.

Go over the Moreland Distillate Truck point-by-point with one of our salesmen and compare it with what the eastern manufacturer believes is a practical vehicle for western use. We know you will agree with us that your commercial needs will be better taken care of by a vehicle designed for use in the territory in which it will operate. The Moreland Motor Truck Company knows the haulage conditions of the West just as well as you do, and we know that the average commercial vehicle built to operate under eastern conditions is not 100 per cent efficient in the West.

We have every right to feel that there is no better motor truck made than the Moreland. They cost less f.o.b. Los Angeles than the same quality of vehicle costs shipped from the East.

Moreland Motor Truck Company

1701-1731 N. MAIN STREET

LOS ANGELES, CAL.

Branches in All Important Centers West of the Rockies



"OVER THE TOP"

POWERFUL, rugged and dependable, Duplex 4-Wheel Drive Trucks are going "over the top" of the first line trenches in the transportation world—attacking difficult haulage problems—whipping delivery methods into a state of high efficiency.

Duplex Trucks are extending the trade of the nation by carrying freight overland—hauling food-stuffs, building supplies, coal, oil and minerals—giving 24-hour-a-day service if necessary—surmounting trying transportation obstacles for manufacturers, contractors, retail merchants, lumber operators—business men in every field of endeavor.

Exclusive application of the Duplex 4-Wheel Drive principle makes Duplex Trucks just as dependable in winter as summer—equal to any emergency. They give never-faltering service 12 months of every year—haul capacity loads under the stress and severity of most adverse road conditions. They are giants for work and are performing

on snow and ice-covered roads titanic haulage tasks that are attempted by no other type of motor truck.

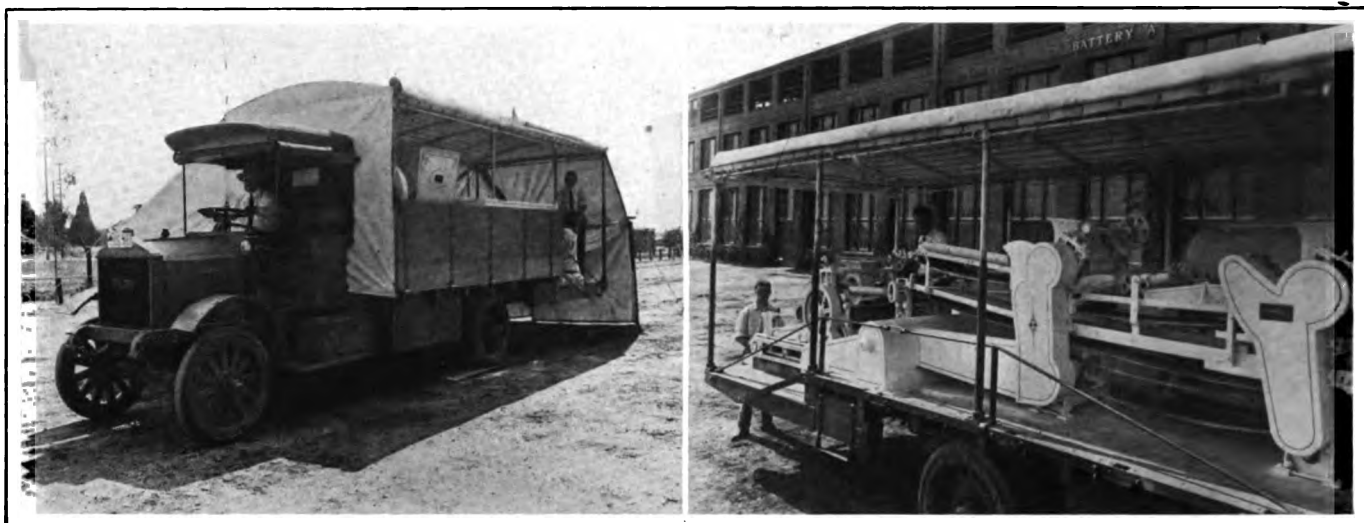
If you would lower your haulage costs; if you are in the market for an all-year-round truck, let us send you complete information about the Duplex. Our engineers will send you facts and figures for your particular business. Write for our catalog and the heavy haulers' magazine, "Duplex Doings."

TO DEALERS—Our production has been trebled and an opportunity is now offered established dealers to become distributors for the Duplex—the truck that hauls capacity loads anywhere. Complete information will be sent you upon request.

Address all communications to Dept. 102

DUPLEX TRUCK COMPANY
LANSING, MICHIGAN

NORTHWEST AUTO CO., Portland, Oregon WESTERN DISTRIBUTORS



Garvey bread-making outfit, mounted on Selden truck, which can make and bake 6,000 loaves an hour for the Sammies. (Left) The platform folds against the side of the truck for transit. (Right) This side of the machine rolls and kneads the dough and cuts the loaves into any size and weight desired.

Fresh Bread for "Sammies"

Garvey Baking Outfit Mounted on Selden Truck Chassis Can Turn Out 6,000 Loaves Per Hour

FRESH bread at any and all times for the American soldiers will be possible, if the War Department approves of a portable automatic bread-making machine that now is being demonstrated at the Presidio at San Francisco, and determines upon their installation. The bread-maker is the invention of James Garvey, and its adaptation to motor truck has been brought about by Ralph Hamlin, Pacific Coast representative of the Selden Truck Sales Co., Rochester, N. Y.

Bread that is fresh and highly palatable is very much desired by soldiers, but at present time there is no way to keep them supplied with it when at the front. Usually the bakery is far in the rear, or there is no fresh bread at all. But with such a machine as Garvey has designed, mounted on a powerful Selden truck chassis, it is believed possible to remove this condition, as the truck is well able to keep up with any other part of the transport, and the productive speed is sufficient to supply any need quickly.

It is claimed that the Garvey automatic bread-making machine in connection with the Selden, is the only unit combination in existence that will completely make a loaf of bread, performing all functions customary to hand work. It mixes the dough, molds any shape desired, and divides it into loaves of predetermined weight. Whatever adjustments are necessary to change weights and molds are made by a hand wheel control.

The bread ingredients are put into an automatic mixer and at the proper time are discharged into troughs and allowed to raise. When properly aged, the dough is fed into an automatic divider and molder, and is kneaded as it passes through by chain-operated belt conveyors.

The capacity of the output is, minimum 3000, and maximum 6000 loaves of any size, weight and shape desired in one hour. With five men employed, it will do the same work that 112 men are now required to perform the same

functions in the army. In addition, the dough is machined in a sanitary manner, the finished loaves being discharged into baking pans ready for oven.

The outfit weighs three tons and is mounted on a standard $3\frac{1}{2}$ -ton Selden truck. The truck body measures $7\frac{1}{2}$ feet by 20 feet, with a 6-foot drop extension in the rear, $9\frac{1}{4}$ inches below the other part of the body. The rear end is lower so that the bread can be panned at standing height. There is the ordinary baker's cabinet and platform work bench. When in transit the bench folds up, forming one side of the body. There is a top over the entire outfit and when set up for operation it is covered by a canvas tent 24 feet wide and 28 feet long. Provision is made for carrying portable army ovens, bread racks and pans.

When in camp the bread-making machine is operated by the truck's engine. An extended shaft from the truck transmission drives the machinery that transmits the power to the jackshaft by roller chains, and from that to the main shaft extending beneath the floor of the body. The motor operating at a speed of 500 revolutions per minute runs the bread-making outfit. Electric power is used with the transmission in neutral and by separate clutch arrangement operated by a lever. Any single part of the machinery can be run independent of the other parts.

Should the government adopt this outfit, the Selden Company will build the outfit at its Rochester, N. Y. plant.

Wilson Announces a New Five-Ton Truck Model

Stanley C. Wilson, general manager of the J. C. Wilson Co., of Detroit, announces a new five-ton truck to be placed on the market by the company by the first of the year. The new model will follow closely the Wilson design seen in the two- and the $3\frac{1}{2}$ -ton models. Mr. Wilson has found that the freight situation due to war has created a demand for trucks of large capacity and the new five-ton model is being brought forth ahead of schedule on that account. The carburetor of the new model, as will those of its predecessors, use either gasoline or distillate. Mr. Wilson has also announced the division of the country into four districts, each in charge of a supervisor, the step having been taken to enable the better care of the distributors.

DENBY MOTOR TRUCKS

*Pioneers of the
Internal-Gear
Drive*

And Did You Know—

That the Denby internal-gear axle can never be damaged through failure to lubricate it at a given time. Denby internal gears, on tests, have run for months without any lubrication at all.

And the Denby axle is so simple that the average garage mechanic can overhaul it with perfect satisfaction.

These are important points to consider; for no matter how carefully a truck is handled in service, it is human nature to overlook something once in a while.

Investigate it at the Show.



Capacities

1 Ton
to
3 Tons

DENBY MOTOR TRUCK COMPANY

Dept. H.

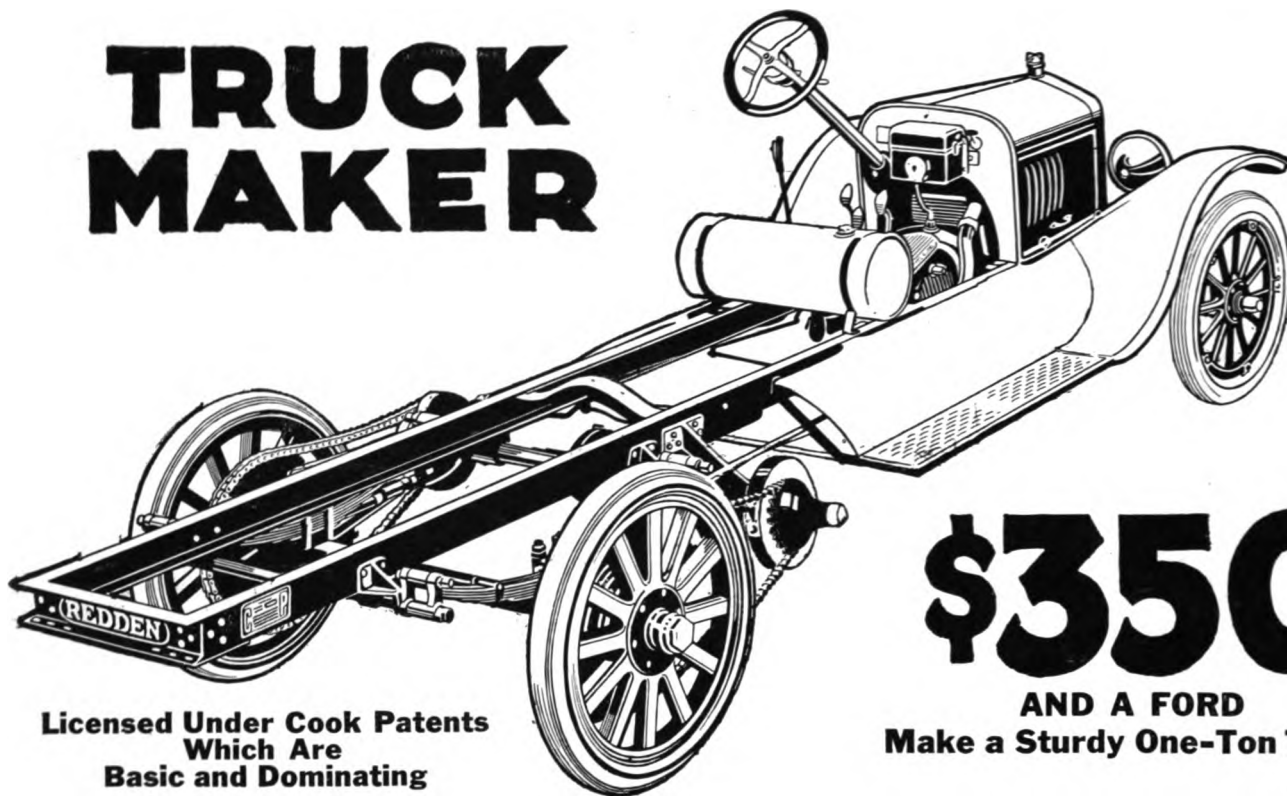
Detroit, Michigan

THREE OF THE DENBY TRUCKS IN DAILY SERVICE ON THE BORDER





TRUCK MAKER



Licensed Under Cook Patents
Which Are
Basic and Dominating

\$350

AND A FORD
Make a Sturdy One-Ton Truck

Unusual Dealer Opportunity

The truck attachment that is the logical one to handle is the one that is easiest to sell.

And the one that is easiest to sell is the one with the greatest number of advantages.

And the Redden is that one—it has ten big features that proclaim it to be the biggest value on the market.

A mere advertisement cannot do these Redden superiorities full justice. But they are set forth in complete detail in an interesting piece of literature which we will be glad to send you for the asking without any obligation on your part whatsoever.

Briefly, they are features of size and extra strength,

features of exclusive manufacturing processes, features that help you meet and overcome competition—because the man who buys a truck attachment wants to know.

They are features that tell at a glance why the Redden is the biggest value for the money, and why it cuts haulage costs to the last minimum.

Value for value, the Redden stands supreme. And these, considered with the greater utility, durability, serviceability, and haulage economy, comprise sane selling arguments that mean sales.

Send the attached coupon today for full information. A few

fine dealer territories are still open. Whether you're an automobile, wagon or implement dealer the Redden offers you a sales opportunity that is most unusual.

Send the coupon now. Doing so costs you nothing—places you under no obligation. It is simply your request for facts that must spell real opportunity and good business for you.

Redden Motor Truck Co., Inc.
1442 Michigan Ave. Chicago, Ill.

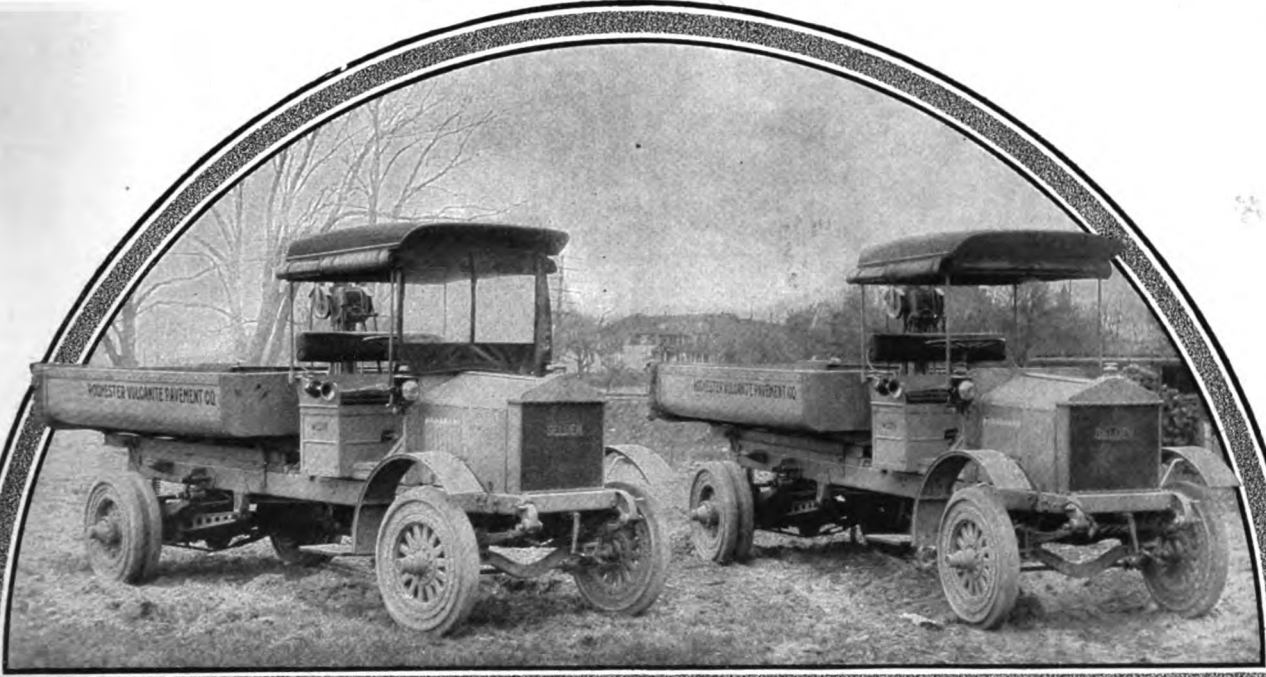
REDDEN MOTOR TRUCK COMPANY, Inc.
1442 Michigan Ave., Chicago, Ill.

Without cost or obligation on my part, send me complete Redden data and information regarding your dealer-representative plan.

Name

Line of Business

Address



Selden Trucks

Selden Truck Makes Better Record Than Higher Priced Trucks

A truck user in Silver City, New Mexico, informs us that his Selden Truck has been in use **every day** and a great many nights for 4½ years and has never given him an hour of trouble. He also says, "We have a number of other makes of trucks in use, but not even the — and the — (here he mentions the names of two of the highest priced trucks on the

market to-day) have equalled the record of our Selden Truck."

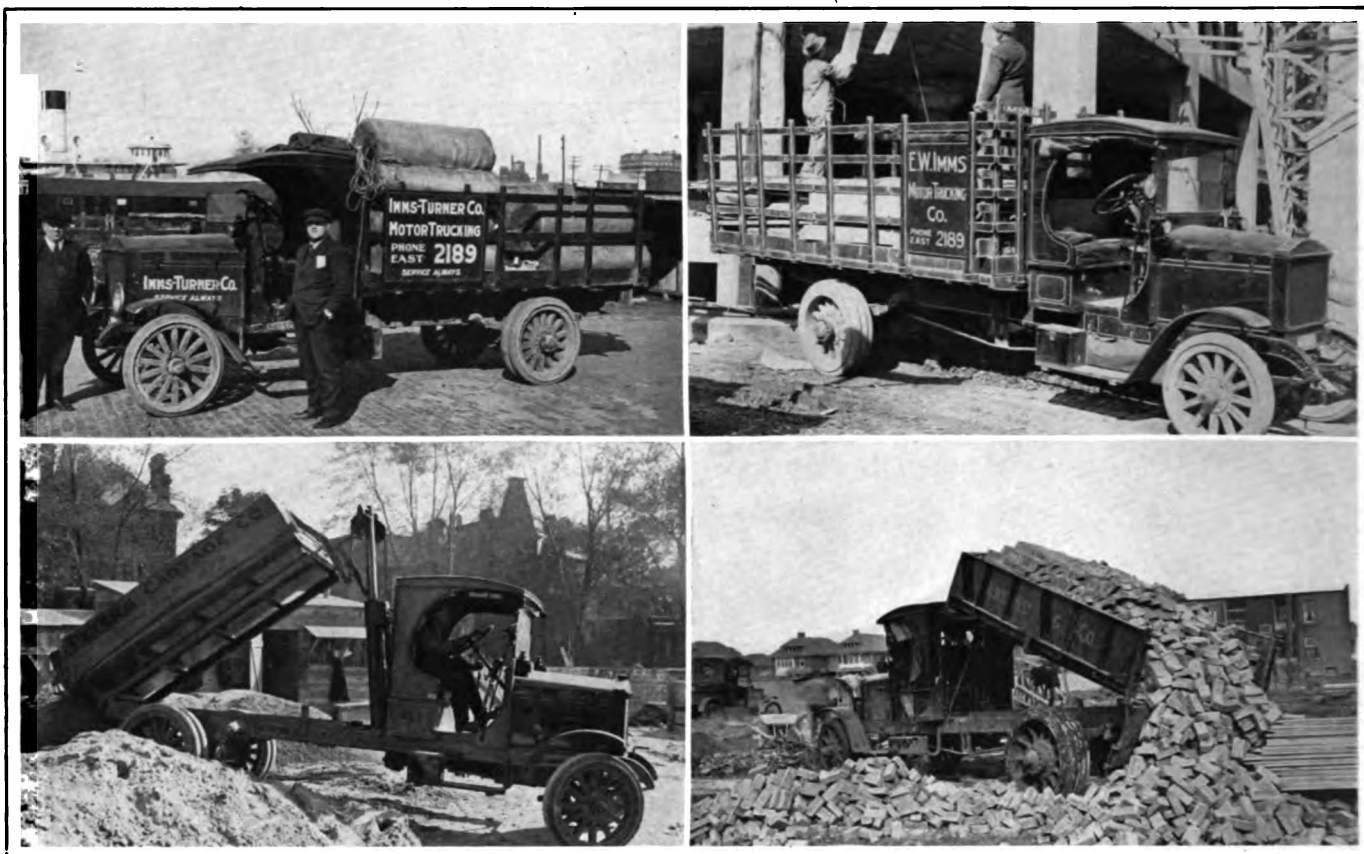
This record, yet common, performance of the big, powerful Selden Truck is especially significant because of the unusually rough nature of the roads in and around Silver City.

Put Selden Trucks to the test and they will make good every time.

Light Delivery, 1, 2, 3½, 5 Ton
Worm and Internal Drive

Write for complete information on the Selden Line

Selden Truck Sales Company
Rochester, N. Y., U. S. A.



Showing some of the jobs turned out of the Acason Motor Truck Co.'s plant—(Upper left) 2-ton, with body 12x5½ feet. (Lower left) 3½-ton with Woods hoist and steel dump body. (Upper right) Another 3½-ton job with stake body. (Lower right) 5-ton with Woods

Acason All-Purpose Trucks

Furnish Models for Every Commercial Need and in All Desirable Capacities and Bodies

A COMPLETE line of trucks, including 1½-, 2-, 3½- 5-ton models, as well as light duty and heavy duty tractor-trucks, comprise the Acason models built by the Acason Motor Truck Co., Detroit.

Although the Acason has been on the market but three years, it has achieved a reputation for sturdiness and reliability that extends beyond the borders of the United States, resulting in orders from the allied governments that has hitherto absorbed a good part of the output facilities of the factory.

With a view to the wider development of the domestic field, the Acason Co. has adopted definite plans for a considerable expansion of its manufacturing and sales effort, and the first step in this direction was the election to the office of vice-president and sales director of John F. Bowman, formerly sales director of the Federal Motor Truck Co. Mr. Bowman recently opened sales offices in the Kresge Building, Detroit, and has begun the work of building up a strong dealer organization throughout the country.

In construction details, the Acason typifies the most modern practice in the construction of a motor truck best suited to nearly all haulage needs, including such high-grade units as Timken-Brown worm drive axle, Waukesha motor, Eisemann high-tension magneto, Brown-Lipe trans-

mission, Blood universal joint, and Schebler carburetor with air control on dash.

The Waukesha motors used exclusively in all Acason models are made especially for truck use, and exceptionally high efficiency with low up-keep and repair is claimed for them by the makers. Sturdy construction throughout is typical of these motors, the crank shaft, for example, having twice the elastic limits of the average shaft. The very thorough and reliable lubrication system maintains a constant wash on all parts on the inside of the motor, making certain that every part will be thoroughly lubricated at all times. These motors are equipped with governors of the fly-ball type, which are located in the front end of the gear case and are sealed and self-lubricated.

Acason frames are of pressed steel which is flexible and extremely strong, besides offering a smooth surface for the attachment of the various frame castings. Radiators are of the cast tank type which can be taken apart and cleaned. They are set on the bottom tank instead of being supported from the sides and subjected to twisted strains from the frame. Standard hickory wheels are used, steel wheels being offered as optional equipment at an extra charge. Any standard make of tires are supplied with Acason trucks, the S.A.E. pressed-on type being recommended by the makers.

The wheelbase of the various models is as follows: 1½- and 2-ton models, 150 inches; 3½-ton model, 166 inches; 5-ton model, 172 or 192 inches. Standard bodies furnished with Acason models are of the stake type, the dimensions of the 1½- and 2-ton bodies being as follows: 12x5½ feet, 36-inch stakes; the 3½-ton model, 14x6½ feet, 42-inch stakes.

What They All Say Must Be True

—and most of the large manufacturers concede that the big line of rubberized, waterproof fabrics made by the L. J. Mutty Company, is the most desirable, the most attractive, the most durable, and the most practical in the manufacture of automobile tops, upholstery and side curtains. *Our specialties*—such as

Bull Dog Quality Fabrics



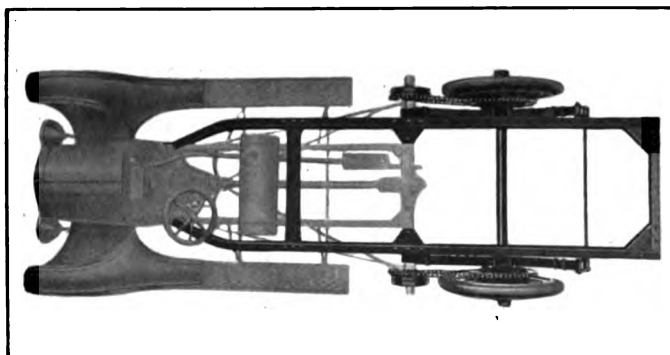
are absolutely guaranteed, and are the standard by which comparisons are made.



DrideK is a *waterproof* material, in leather or rubber finish, that is ideal for automobile tops. Send for samples and prices. They will interest *you*!

L. J. MUTTY COMPANY
BOSTON, MASS.

SCOVEL IRON STORE COMPANY, *Pacific Coast Agents*
SAN FRANCISCO, CALIFORNIA



SHOWING THE OVERTON SEMI-TRUCK ATTACHED TO FORD CHASSIS. THE DARK PORTION SHOWS THE OVERTON ATTACHMENT.

Overton Semi-Truck Rated at 1½ Tons

The Overton semi-truck is rated with 1½ tons capacity and is manufactured by the Overton Truck Co., of Detroit, Mich. The truck attachment bolts to the Ford car frame at the two ends of the Ford rear axle and also to the car frame in a line back of the engine. There is no hole boring or any mutilation of the Ford parts and a wrench is the only tool required in assembling. The result is a light delivery car with a capacity of 3,000 pounds and a total wheelbase of 125 inches. The manufacturers furnish two types of body—the express type, 9 feet long, 12-inch sides and 5-inch flare-boards, \$60; and the stake type, 9 feet long, with 30-inch stakes and racks, \$60. Loading space is from 8½ to 10½ feet back of the driver's seat, according to the body installed. The truck frame is of pressed steel, 4 inches deep. Final drive is by chains, sprocketed on the Ford rear axle. The springs are 2½ inches wide, bringing the load very close to the wheels. The rear wheels are geared 7 to 1 with engine. Tires are solid, 32x3½ inches. The Overton truck attachment is sold for \$285, f.o.b. Ann Arbor, Mich., or Detroit.

Garford 2-Ton Job is Practically a New Model

The Garford Motor Truck Co., Lima, O., has made a number of important changes in its model 70B two-ton vehicle. In fact, the truck is practically a new one throughout. It is made in two lengths, the standard wheelbase being 142 inches, and the long wheelbase 166 inches.

The entire design of the front end has been improved by the adoption of the finned-tube type of radiator in a cast casing, by the addition of a substantial steel bumper, and the application of bars across the front of the radiator to protect the core. The core is of the vertical helically-finned type, and the cast casing is built up, carrying deep fins on the upper tank to carry off the heat. Two stout iron bars are bolted to the sides of the casing, extending across the radiator, and the bumper is laid across the spring horns.

In the rear system important changes have been made. The Hotchkiss drive, which is used on the small worm-driven types, has been strengthened by the adoption of the double-eye form of front pinning. It is at this point that propulsive stresses come, and therefore additional strength here is desirable. The main leaf encircles the usual fixed pin, held by a heavy frame bracket. To either side of this pin are swung triangular plates, carrying two additional pins. One of these is forward and slightly below the main pin, and carries the eye of the second leaf,

which extends forward. The third is below the spring and serves as a retainer for the two plates.

To further strengthen the front part of the spring, three rebound clips are used. The middle of the spring has also been reinforced. The spring does not rest directly on the spring pad of the axle, but on a metal block.

An unusual disposition of the bumper spring has been made, for instead of mounting it on the axle or the top of the spring with a special plate on the frame, it is inverted, being carried directly underneath the frame, and acting on the extended surface of the spring perch. It is a coil spring of rectangular section.

A neat disposition of the brake-rod return springs has been made in the new Garfords, a triangular plate being inserted under the nuts that retain the worm-gear housing of the axle, into which the springs are hooked.

Air-O-Flex to Build Ten Trucks Per Day

Plans have been prepared for the group of factory building for the Air-O-Flex Motor Corporation, of Detroit. This organization will build the Air-O-Flex truck, which combines in its structure principles which bring about wonderful flexibility through the use of suspension cylinders. Air, oil, vacuum and pressure form the basis for a mechanically correct and very satisfactory suspension. The claim is made that these features overcome the greatest foe to the life of motor truck and pleasure cars. Road shock and vibration, due to the present form of non-adjustable suspension, have been overcome.

The corporation controls the pneumatic suspension patents, and in the plant will manufacture Air-O-Flex cylinders, and a line of motor trucks.

When the plants are completed the factory floor space will be more than 300,000 square feet, exclusive of the administration building. Construction of the first unit, containing 100,000 square feet, will be started soon, and building operations will be practically continuous, as the factory grows in pace with the business. It is planned to make the output 10 trucks per day in the first factory unit, and to start conservatively increasing the factory production facilities as warranted by sound business judgment.

The Air-O-Flex truck is of 1½ ton capacity fitted with a Continental motor, 3¾ by 5¼, and has many most interesting features. The price of the chassis with cab will be \$1700 f.o.b. factory.

Motor Truck Aids Railroads in Short Haul Shipments

To permit of prompt handling of troops, supplies and munitions, the American Railway Association has appealed to all shippers to "eliminate the use of railway equipment when tonnage can be handled by motor truck." A more general use of motor trucks for short-haul work is necessary if a satisfactory degree of efficiency is to be reached by the railroads in meeting added demands.

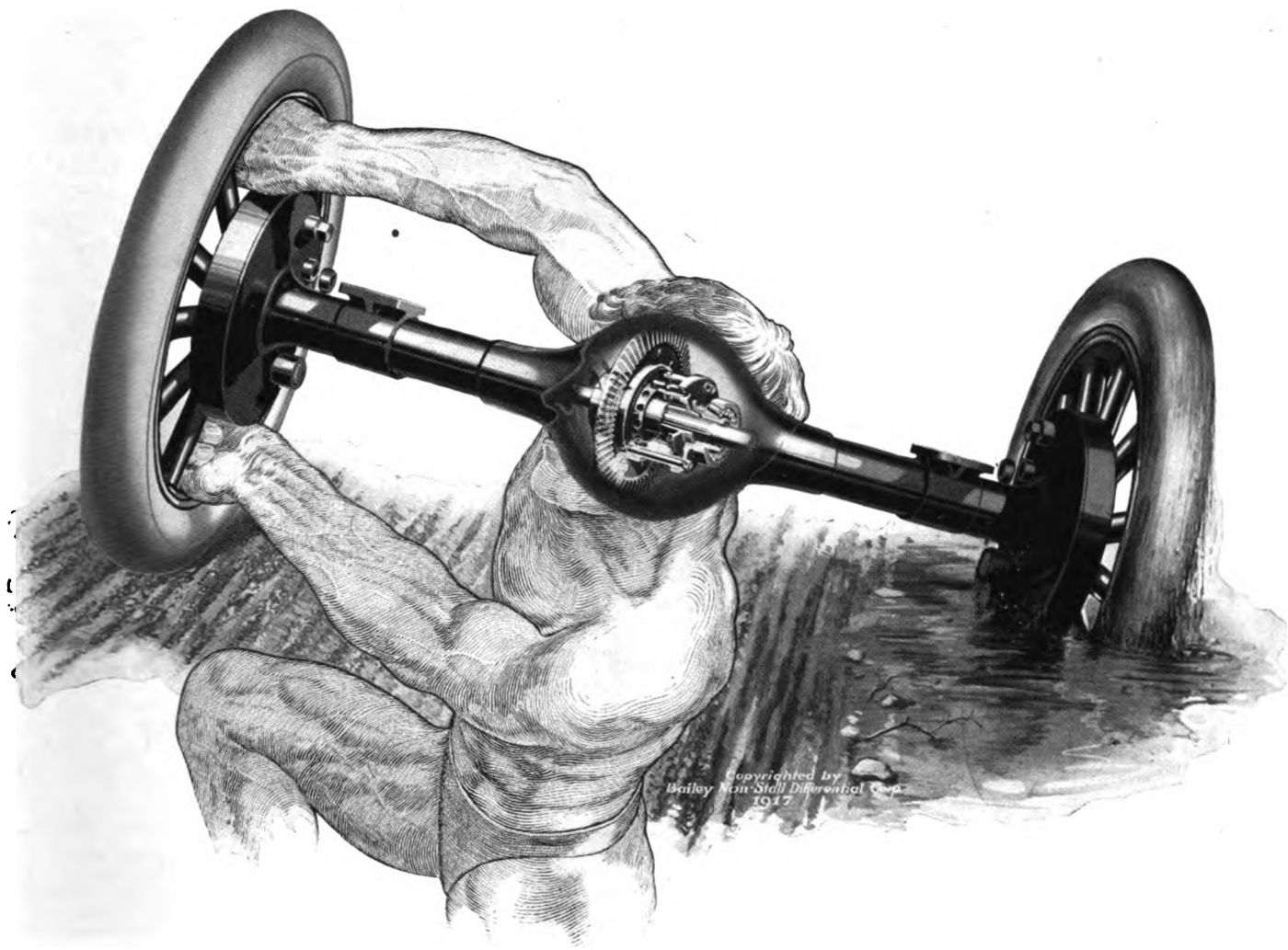
The government now classes a 40-mile haul as a motor truck haul, and shippers who want to aid the Government as well as to improve their own service have enlisted the motor truck as the logical carrier for hauls up to and even beyond this distance.

San Francisco, Cal.—Logan & Stetson, distributors of M. & W. worm-drive attachments, have located at 455 Golden Gate Ave.

BAILEY

Non-Stall

DIFFERENTIAL



Copyrighted by
Bailey Non-Stall Differential Corp.
1917

Big Seller in Winter!

Bad roads; deep, slippery ruts; mud holes; watery places; skiddy surfaces and all such dangers have no terrors for the driver—

Whose delivery or passenger car has a **Bailey Non-Stall Differential** in the rear axle.

With old-style differentials the power from the motor is ignorantly and dangerously misdirected to the wheel *without* traction, leaving the wheel on firm ground helpless.

This misapplied power is worse than wasted—it causes spinning, side-sway and skidding.

It causes trouble and needlessly destroys tires.

The BAILEY avoids *all* this.

It *intelligently* directs power to the wheel that has traction and can use it.

It can be fitted into many rear axles.

It can be easily installed.

Bailey Non-Stall Differential Corp.

1124 Michigan Avenue, CHICAGO, ILL.

THESE REAR AXLES TELL THE STORY

The sturdy L & B FORD TRUCK UNIT is built on the solid foundation of the best rear axle construction existant, in three types—Internal Gear, Chain and Worm Drive. Companion parts are of equal



SHELDON 1 1/2 TON WORM AXLE

quality, making L & B the Truck Unit of UN-QUESTIONED DEPENDABILITY.

Note the following details:

SPECIFICATIONS OF L & B WORM DRIVE TRUCK

CAPACITY—One Ton. **WHEEL BASE** 122". **LOADING SPACE** 5'x9'.

FRAME—Special 4" Channel.

SPRINGS—51"x2 1/2" easy riding and of ample capacity.

WHEELS—Wood, 14 Spokes; size 32"x4".

TIRES—Solid, 32"x4", Press on Type.

REAR AXLE—Sheldon Worm Drive, 1 1/2 ton capacity, 57" tread.

BRAKES—Dual Internal expanding, two on each wheel, 16"x2 1/2".

AXLE SHAFTS—3 1/2% Nickle steel, heat treated, No. 311 double row annular bearings used in wheels.

DIFFERENTIAL—Gears and pinions 3 1/2% Nickle Steel, heat-treated and ground, 1 1/2" face, 4" pitch, Spider arms 1", mounted No. 215 double row.

WORM AND WORM WHEEL—And Differential mounted in one Carrier, which can be removed from the Housing as a complete unit.

GEAR RATIO—6.5 to 1.

FINAL DRIVE—Through Thermoid Universal Joints at both ends of heavy tabular shaft.



SHELDON 1 1/2 TON CHAIN AXLE

SPECIFICATIONS OF L & B CHAIN DRIVE TRUCK

CAPACITY—One Ton. **WHEEL BASE** 125". **LOADING SPACE** 5'x9'.

FRAME—Special 4" Channel.

SPRINGS—2 1/4" wide, 10 leaves made from Special Steel. **OVER-LOAD SPRING** 2".

WHEELS—Wood, 32"x3 1/2", 14 Spokes.

TIRES—Solid Tires, 32"x3 1/2".

REAR AXLE—SHELDON drop forged and heat treated, 1 1/2-ton size.

BEARINGS—Bower Roller Bearings, sizes No. 309 and No. 310 in each wheel.

BRAKES—Internal expanding, heavily lined. Brake drums pressed steel, 13 1/2"x4". Service and emergency on rear wheels.

SPRING MOUNTING—Mounted on separate hangers from the Jackshaft supporting the load and absorbing all road shocks.

JACKSHAFT—Making use of regular Ford Axle and Housings machined to shorter length and mounted in rigid, clamp type

hangers, whose sole duty is to support the Jackshaft and one end of the Radius Rod. Entirely independent of spring suspension.

RADIUS ROD—Heavy casting with universal action to take stresses and strains from all directions. Twisting and distortion, due to bad road conditions, will not affect this assembly.

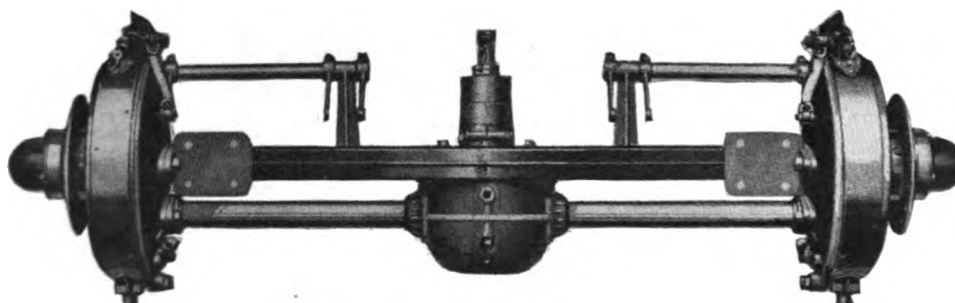
CHAIN AND CHAIN ADJUSTMENT—No. 211 Whitney, 1 1/4 pitch, 3/4" diam. roll, usually used on two-ton trucks. Chain can be adjusted with any ordinary adjustable wrench.

SPROCKETS—Rear Sprockets ring type, 44 teeth bolted to flange of brake drum. Front Sprockets 23 teeth, special sprocket steel, all teeth milled to exact size.

DUST CAPS—Enclosing brakes, keeping out dirt and mud, having large bearing surface on axle, absorbing all strains from the Radius Rod assembly.

GENERAL—This truck has been designed (not copied from others) to give the owner long life and satisfactory service. The factor of safety on all parts is especially large and will bear rigid investigation.

INTERNAL GEAR SPECIFICATIONS: Same as worm-drive except axles, 32x3 1/2 tires and 7 to 1 Gear Ratio.



TORBENSEN 1 1/2 TON INTERNAL GEAR AXLE

Sole Manufacturers
of
**CRUMP'S
FORD TRANS-
MISSION**

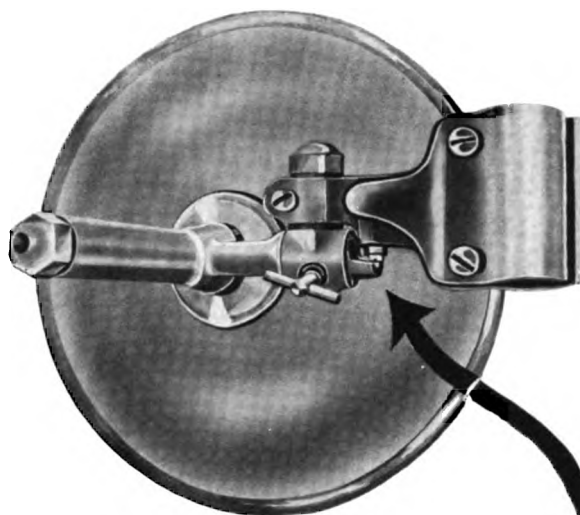
The original "gears
always - in - mesh,"
ball bearing Ford
Auxiliary Transmis-
sion. Over and un-
der drive.

The L & B Ford Truck Attachment — Made in Los Angeles

L & B TRUCK MANUFACTURING CO.

Office and Retail Salesroom: 1416 S. Los Angeles St. Factory: 54th and Boyle.

SOME ATTRACTIVE TERRITORY OPEN. LIBERAL DEALER DISCOUNTS. INQUIRE PROMPTLY



Rear View of Silverbeam Spotlight

Detachable for Trouble Lamp or for lighting camp at night. Has inclosed dust-proof and water-proof switch.

We sell through jobbers only, and are represented on the Pacific Slope by

HUGHSON & MERTON, Inc.

Los Angeles, San Francisco, Portland and Seattle

Manufactured by
WILLIAMS MFG. CO.

310 North Flower Street
SANTA ANA, CAL.

WILLIAMS'

Silverbeam

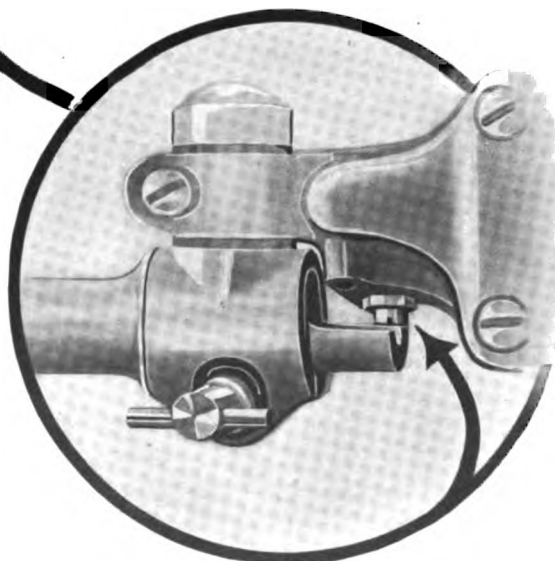
Spotlight

Has adjustable control to comply with requirements of the lighting laws of all States. May be used for either left or right side of windshield.

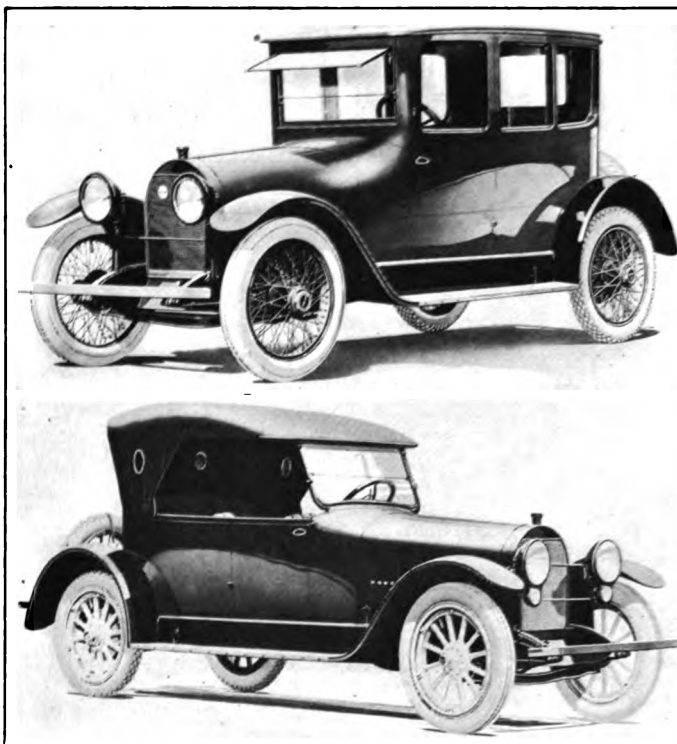
TWO SIZES
(6 AND 7 INCHES)

Model A - \$9.00

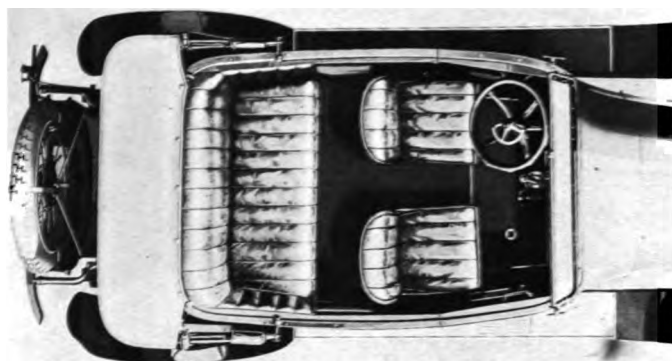
Model B - \$10.00



Detail of Adjustable Control Feature of Silverbeam



KISSEL 100-POINT SEDANLET, WINDOWS HALF-LOWERED. EQUIPPED WITH NEW SUMMER TOP OF VICTORIA STYLE.



PLAN VIEW OF SEATING ARRANGEMENT OF SEDANLET. "CLOSE-UP" OF ALL-YEAR TOP ON THE NEW MODEL.



Enter the Kissel "Sedanlet"

New Model is a Closed, Semi-Open or Open Car, at Will — Touring Sedan Also Here

MANY innovations in body designing and construction characterize the new four-passenger Kissel "Sedanlet" and the seven-passenger staggered-door Touring-Sedan, recently announced by the Kissel Motor Car Co., Hartford, Wis.

The Sedanlet is equipped with the latest Kissel all-year top, which is entirely removable, with a new feature in that all windows, except the rear one, can be raised or lowered at will. This renders the Sedanlet a closed car in stormy weather, a semi-open car by lowering the windows, or an open touring car by removing the all-year top. An added feature is a new distinctive pantasote summer top of victoria style in the rear, with one French beveled glass "porthole" on either side and two in the rear.

On the other hand, comfort has not been sacrificed to appearance. Ample leg room and space has been provided—16 inches leg room in front and 15 inches in the rear. From the floor of the tonneau to the all-year top the height is 4 feet, 4 inches on the inside.

The frame and doors of the detachable top are of heavy selected white ash and elm rigidly joined and covered with silver finish sheet metal, while the roof is three-ply paneled white wood under heavy laminated duck canvas. Body and top are joined at ten points by means of concealed rectangular bolts and sockets. Noise between the lower body and the top is eliminated by a layer of felt and non-squeak material.

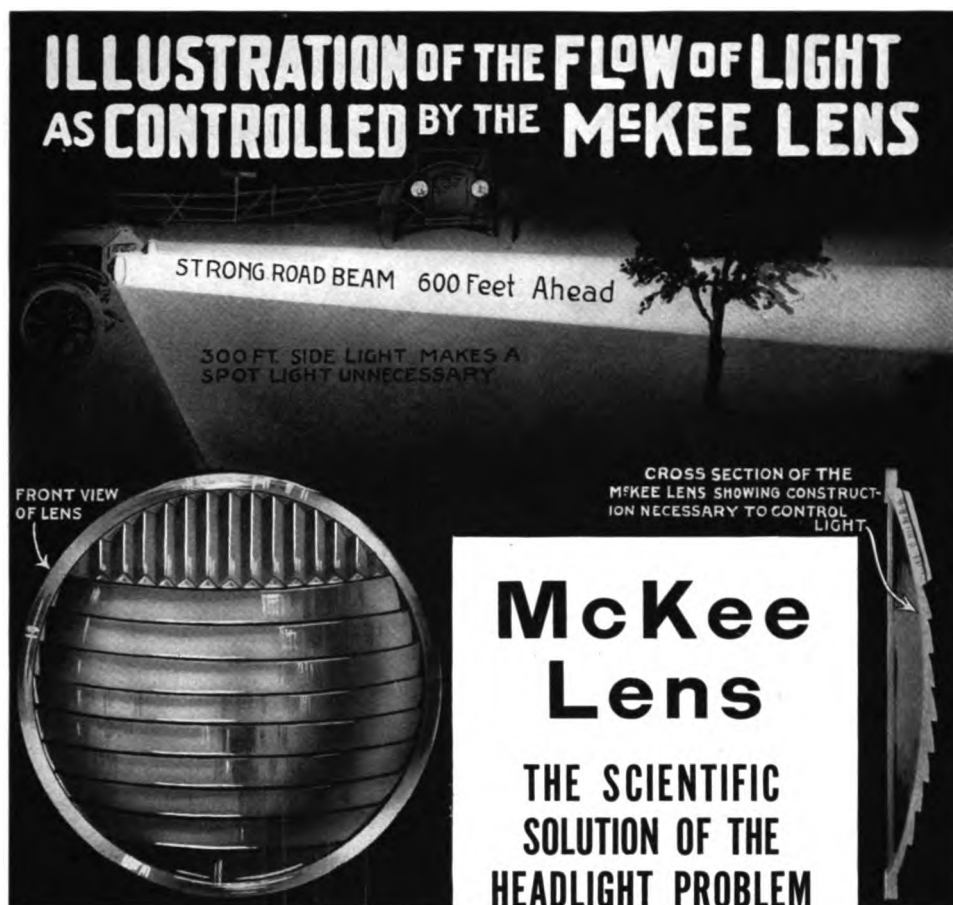
Ventilation is obtained through the double windshield, and all windows, excepting the rear one, are adjustable at any height and drop into the lower body their full length if desired. Both the Sedanlet and the Touring-Sedan have twenty-two coats of body finish, eight more than usual. The tonneau hangs low and gracefully, with ample clearance due to an arch in the bow of the frame.

The Sedanlet is available on the Hundred Point Six chassis, with the sturdy Kissel-built power plant, axles and double external brakes, and on the new Double Six chassis. The price of the Hundred Point Six Sedanlet, with all-year and new special summer top, of victoria style in the rear, is \$1,885; with summer top only, \$1,485. The Double Six with both tops is priced at \$2,800; without all-year top, but including special summer victoria top, \$2,350 f.o.b. factory.

The seven-passenger staggered-door Touring-Sedan model is differentiated from the regular five-passenger sedan by the two doors, instead of three, one of the left side by the driving wheel and the other on the right side, opening into the tonneau; the new all-year top in which all the windows but the rear can be raised or lowered; the new special victoria-style summer top; and the two auxiliary seats that fold into the two forward seats. Mounted on the Hundred Point Six chassis only, the price, including the new all-year and special summer victoria-style tops, is \$1,885 f.o.b. factory. Without the all-year top, but with the new special summer top, the Kissel Touring-Sedan model is listed at \$1,485.

No Change in Series '18 Studebaker Models

R. T. Hodgkins, sales manager of the Studebaker Corporation, is authority for the statement that his company does not contemplate a change in models this year. In making public this information, Mr. Hodgkins says: "In our opinion, Studebaker engineers have reached a point of near perfection in the series '18 cars. Our engineers have been concentrating on the one basic design now for the past four years and have, naturally enough, been able to constantly improve and refine our product. They have taken advantage of the splendid opportunity to observe the performances of 300,000 Studebaker cars in the hands of owners, in every part of the world, and through this experience of actual service the series '18 Studebaker cars have been evolved. I can say definitely there will be no change in models this year. Prospective buyers of a motor car may purchase a Studebaker car now with the assurance that no sudden change in models will discount or depreciate the value of their purchase."



**Case No. 36507
JUDGMENT**

The court in a recent decision holds that the
MCKEE STANDARD AUTOMOBILE LENS
COMPLIES WITH THE CALIFORNIA LAW.

The MCKEE STANDARD AUTOMOBILE Lens is inexpensive, it is not a dimmer, it increases your light intensity 63 per cent over a window glass lens. Makes night driving a pleasure, complies with all anti-glare laws, eliminates accidents. It is the best and cheapest insurance you can buy. Have your dealer install a pair today. Your money back if you are not satisfied.

Ralph G. Whitlock
Broker and Manufacturers' Agent
329 West Second Street
Los Angeles
PHONE A 4111

DEALERS—Write for Terms and Discounts.

Mechanical Features of New Allen Model

Two mechanical features of the New Series Allen 41, manufactured by the Allen Motor Co., Fostoria, O., are especially noteworthy. They are the quiet, economical, flexible motor, so elastic that the throttle controls a speed range of from 2 to 50 miles an hour, and the power transmission line, that is built up of the best mechanical features known to the trade, such as a Borg and Beck 10-inch single dry disc clutch, which assures gradual and positive engagement, an Allen selective transmission which has the unusual gear ratio of 45.11 to 1 for high as compared with 14.25 to 1 for low, two universal joints, hollow propeller shaft and full Hotchkiss drive, turning a 1½-inch faced pinion and ring gear with spiral bevel teeth housed in a full-floating rear axle.

There are many more minor yet important features embodied in this chassis. The radiator is a Perfex "honeycomb." Intake and exhaust manifolds, spark plugs, valve adjustments, oil pump, oil filler, Stromberg carburetor, carburetor intake furnace, primer cups and practically all motor adjustments are on the same side of the motor. The fuel is supplied by Stewart vacuum feed from a 13-gallon rear gasoline tank with sight gauge and winged filler cap.

The new Allen bodies are roomy, low hung and elegantly furnished with the very best upholstery.

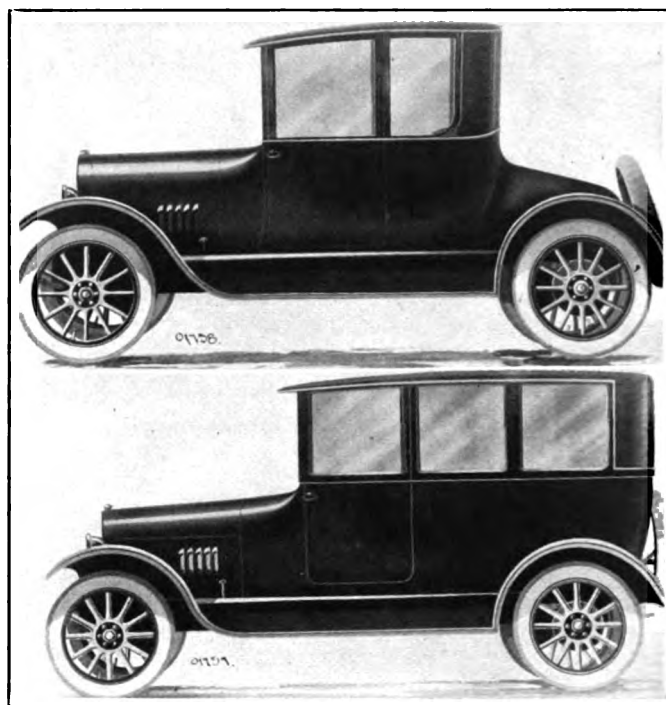
The dash of the new Allen contains only carburetor choke, speedometer, ammeter, Connecticut automatic ignition circuit-breaker and dash light. All electric controls for starting, lighting, ignition and Garford motor driven horn are in unit in the Connecticut Rotary Master Switch mounted just below the wheel on the steering column and locked at the same time by a Yale key.

The 41 chassis carries three bodies—the five-passenger touring, the four-passenger roadster and the five-passenger sedan selling f.o.b. Fostoria at respectively \$1095, \$1095 and \$1395.

Olympian Announces Three Styles of Closed Cars

Three styles of enclosed cars have just been announced by The Olympian Motors Co., of Pontiac, Mich. The present tendency in designing closed cars is to increase comfort and luxury to the highest degree. This has been accomplished in the new Olympian line, which includes a Sedan, Springfield type, Coupe and Winter Detachable Top.

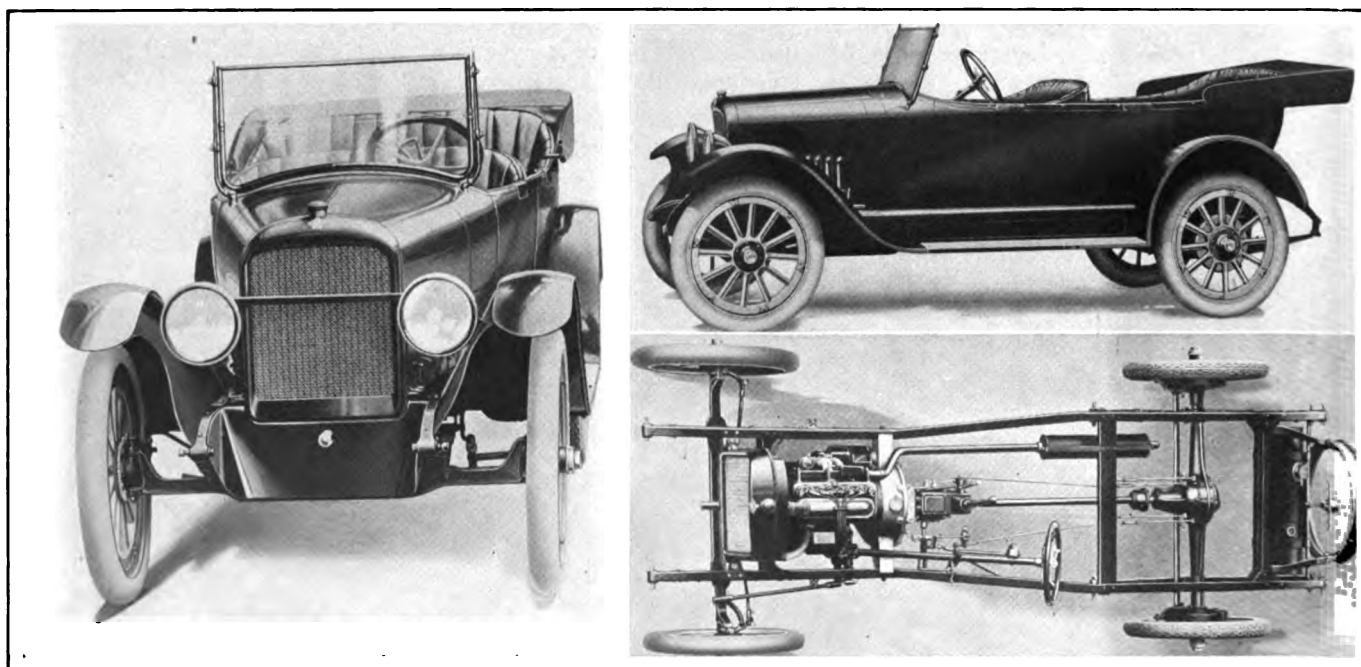
Women who have learned to preside at the steering wheel show a marked fondness for the modish coupe, which type physicians and professional men also prefer.



(UPPER) OLYMPIAN CABRIOLET. (LOWER) OLYMPIAN SEDAN.

Social requirements are met by the Olympian Sedan, which has several exclusive features. The car is very roomy and yet has a friendly atmosphere permitting the owner-driver to be one of the party. The Winter Detachable Top is the choice of many who desire in one vehicle the advantage of a closed car for the winter and a touring car for the summer. This car has many features which ought to make it a popular car this season. Many of the objectionable points in the winter detachable top have been eliminated, such as window and door rattling, etc.

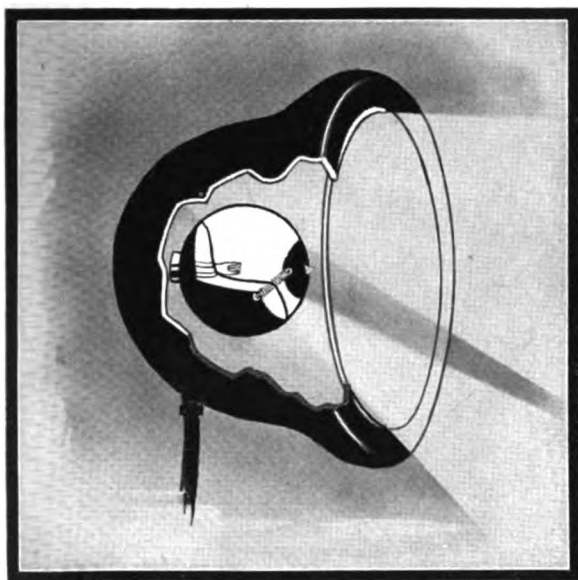
The Olympian Motors Co. has given special attention to finish, trimmings and upholstery. The doors on all models are wide and the details include many comforts which are desired by passengers. Olympian dealers throughout the country will hold special closed car salons to display these new models.



THE 1918 ALLEN—(LEFT) FRONT VIEW, SHOWING CLEAN-CUT LINES. (RIGHT, UPPER) SIDE VIEW INDICATES COMFORT IN EVERY LINE. (LOWER) PLAN VIEW OF ALLEN CHASSIS.



California Prohibits Glaring Headlights



Perrin No Glare is a thin aluminum shield that is held fixedly in place around the headlight bulb. Being inside the headlight it will not break in every little accident. Always in position and will not break or burn out bulbs. Deflects all the driving light out and down on the road without any "glare." Patented June 9th, 1914.

California has a state-wide law prohibiting glaring headlights on automobiles. On country roads or city streets you must not have glaring headlights. Get your machine ready now—equip your headlights with PERRIN NO GLARE and you will comply with all headlight laws.

Obey the Law—Put Perrin's on Your Headlights Now

The use of Perrin No Glare's in your headlights eliminates all the glare without reducing the driving light. Don't risk injury to yourself and your machine by covering your lights to comply with the law. For safe night driving you must have driving light, so use Perrin's No Glare's. Perrin's will take the light out of the trees and lay a long, low, powerful beam out and down on the road.

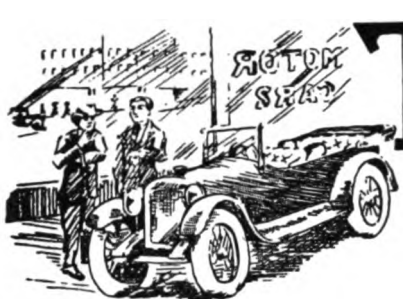
Approved by the Police

Approved by state and city police everywhere. Over 600,000 Perrin's in use today. Complies with all laws and is the best night driving device at any price. Put on in just a few minutes and will last as long as the machine. Buy yours now from

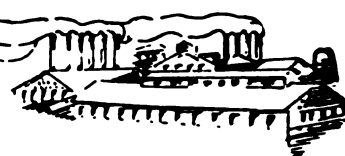
\$1.00
Per Pair

YOUR DEALER OR GARAGE

Perrin Mfg. Co.
DETROIT, MICH.



Trade Briefs and Factory Gossip



McCall White Made Cadillac V. P.

D. McCall White, former chief engineer of the Cadillac Motor Car Co., has been elected to the vice-presidency of the company. Previous to his connection with the Cadillac, White had a very extensive experience with European automobile engine design, having been connected successively with the Arrol-Johnston Motor Car Co. of Scotland, All British Motor Car Co., Daimler Motor Car Co., De Luca-Daimler Motor Car Co., D. Napier & Son and Crossley Motor Co.

* * *

New Small Overland Is Different.

The new small car model of the Willys-Overland Co., Toledo, O., will be designed and produced to meet an entirely different demand from that for any of the company's other models. It will have a short wheelbase, two-speed transmission and front tires 30x3 and rear tires 30x3½. The company hopes to be able to get the new model into production by the summer of 1918.

* * *

Another Million From Studebaker.

For the second time Studebaker has subscribed a million dollars to the Government to help win the fight for democracy. President A. R. Erskine, of the Studebaker Corporation, has announced that his company has purchased \$1,000,000 of the second Liberty Loan. As in the case of the \$1,000,000 purchase of the first Liberty Loan, employees of the Corporation will be given an opportunity to buy a bond, of one of the denominations, on the partial payment plan.

* * *

Fulton Truck Plant Growing.

With the completion of its new office building, occupancy of which will be taken November 1, the Fulton Motor Truck Co., of Farmingdale, Long Island, will have 45,000 square feet of floor space under roof, composed entirely of one-story units. This plant is built in units, 150x20 feet each. All are saw-tooth in construction, and modern in every way. Additional units are being constructed steadily.

* * *

Rohde Heads Wire Wheel Service.

O. J. Rohde has been appointed director of service for the Wire Wheel Corp. of America. Rohde was formerly president and general manager of the Splitdorf electrical branch in New York City. The Wire Wheel Corp. will open service stations in all large cities of the United States.

Emise Still Directs Chandler Sales.

Charles A. Emise, of the Chandler Motor Car Co., will remain an official of the company, attend all meetings of the directors, and in a general way look after the sales of the company while residing in New York during the winter.

* * *

Hood Made King Sales Head.

Wallace C. Hood, until recently of the Wallace C. Hood Service Bureau,



WALLACE C. HOOD.
Sales Manager King Motor Car Co., Detroit, Mich.

Detroit, has been appointed sales manager for the King Motor Car Co., Detroit. He succeeds R. P. Bishop, who resigned to join the Nash Motors Co., Kenosha, Wis., as assistant to C. B. Voorhis, sales manager.

* * *

Kelly-Springfield Cord Tire Ready.

The Kelly-Springfield Tire Co., New York City, has begun production of the new Kelly-Springfield cord tire and distribution is now under way to all of the company's branches and agencies throughout the country.

* * *

Chevrolet Declares Dividend.

The Chevrolet Motor Co., New York, has declared its regular quarterly dividend of 3 per cent on the company's stock. The dividend is payable Nov. 1 to stockholders of record Oct. 15.

Olympian Buys Out Meridian.

The Olympian Motors Co., Pontiac, Mich., has purchased the Meridian Mfg. Co., Indianapolis, from the trustee in bankruptcy. The purchase includes drawings, patterns, forms, dies and materials for manufacturing Olympian bodies, including materials for the new four-door Olympian roadster. The material is being moved to Pontiac, where the company will manufacture all bodies for its cars and will probably turn out twenty a day.

* * *

Bayne Represents Acason Truck.

C. William Bayne has been appointed special representative for the Acason Motor Truck Co. He was formerly connected with the Ford Motor Co., as a special representative.

* * *

Duplex to Build 300 Trucks a Month.

The Duplex Truck Co., Lansing, Mich., will turn out 300 trucks a month during the year 1918. Two factory buildings are now being erected which will provide an additional 100,000 square feet of floor space to allow for further expansion.

* * *

Stewart-Warner Will Earn 40%.

The Stewart-Warner Speedometer Corp., Chicago, is expected to earn at least 20 per cent on its common stock during the year ending Dec. 31, after allowing for excess profits tax. The income will be practically 40 per cent of the current market price. Since Jan. 1, 1917 the company has paid off \$100,000 on notes and will probably be able to pay off a similar amount soon, which will reduce notes payable to \$600,000.

* * *

Fulton Truck Increased \$130.

The Fulton Motor Truck Co., New York City, has made an increase of \$130 in the price of its Fulton trucks, making the new price of \$1,520.

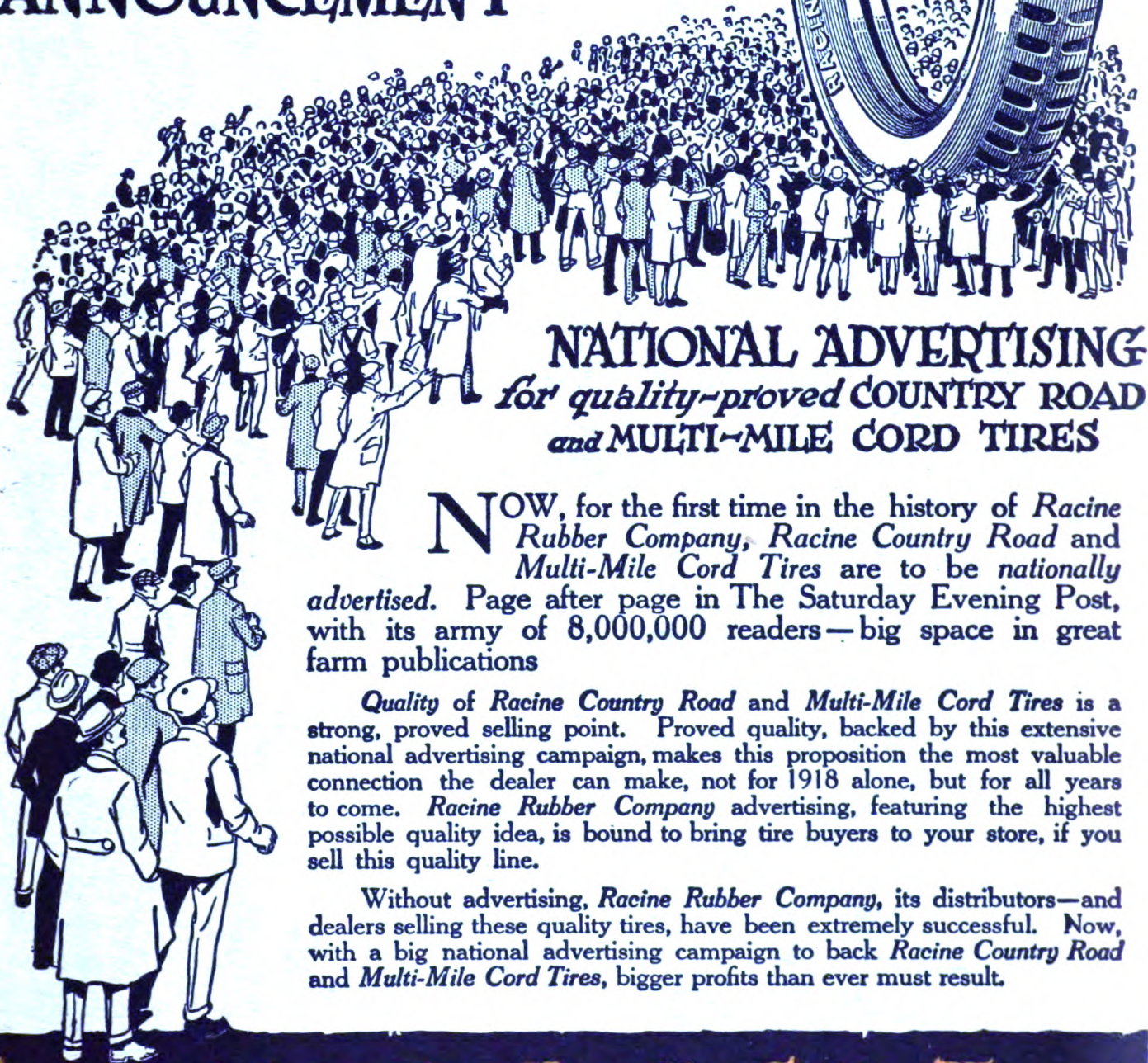
* * *

Standard Steering Wheel Plant Ready

The Standard Steering Wheel Co., Cleveland, O., announces that its completed plant and efficient organization are ready for specializing for 1918 in the manufacture of steering wheels for automobiles, airplanes, trucks, tractors and motorboats. The company operates in connection with the Piqua Walnut Mills and the Hartzell Walnut Wheel Co., and is assured of a continuous supply of raw material of the finest quality for use in making steering wheels, wood rims and spiders.

TIRE DEALERS!

Racine Rubber Company makes,
The YEAR'S MOST IMPORTANT
ANNOUNCEMENT



NATIONAL ADVERTISING
for quality-proved COUNTRY ROAD
and MULTI-MILE CORD TIRES

NOW, for the first time in the history of *Racine Rubber Company*, *Racine Country Road* and *Multi-Mile Cord Tires* are to be nationally advertised. Page after page in *The Saturday Evening Post*, with its army of 8,000,000 readers—big space in great farm publications

Quality of *Racine Country Road* and *Multi-Mile Cord Tires* is a strong, proved selling point. Proved quality, backed by this extensive national advertising campaign, makes this proposition the most valuable connection the dealer can make, not for 1918 alone, but for all years to come. *Racine Rubber Company* advertising, featuring the highest possible quality idea, is bound to bring tire buyers to your store, if you sell this quality line.

Without advertising, *Racine Rubber Company*, its distributors—and dealers selling these quality tires, have been extremely successful. Now, with a big national advertising campaign to back *Racine Country Road* and *Multi-Mile Cord Tires*, bigger profits than ever must result.

Advertising that Really Sells Tires

RACINE

COUNTRY ROAD and MULTI-MILE CORD TIRES

BIGGER MONEY-MAKERS THAN EVER



**Tie Up with This Quality Line
and Watch Your Tire Profits Grow**

NOW—with this strong continuous campaign of national advertising—and with all possible co-operation from the home office—dealers who sell *Racine Country Road* and *Multi-Mile Cord Tires* will make more money than ever before.

The *Racine Rubber Company* line is complete—a tire for every need. The famous *Racine Country Road*—5000 mile guarantee—is a record-breaker for service. Extra quality at no extra price. The *Racine Multi-Mile Cord* is real cord tire quality. Also extra-serviceable red and gray tubes.

Prompt Deliveries From Distributors

Distributors for *Racine Rubber Company* are located at all principal distributing points. Complete stock always on hand. You can get prompt deliveries; all-round efficient service from *Racine Rubber Company* distributors. They are top-notch tire men, with whom you will enjoy doing business. They will co-operate to the limit.

If you are interested in making more money—not in 1918 alone, but in all the years to follow—write at once for the details of this opportunity.

Fill out the coupon—get it to us at once—and all information will be quickly furnished by our nearest distributor.

Racine Rubber Co.
Dept. 4 Racine, Wis.

**RACINE
RUBBER
COMPANY**
Racine, Wis.

Please have your nearest distributor furnish details of the *Racine Country Road* and *Racine Multi-Mile Cord Tire* opportunity, with the understanding that it will in no way obligate me.

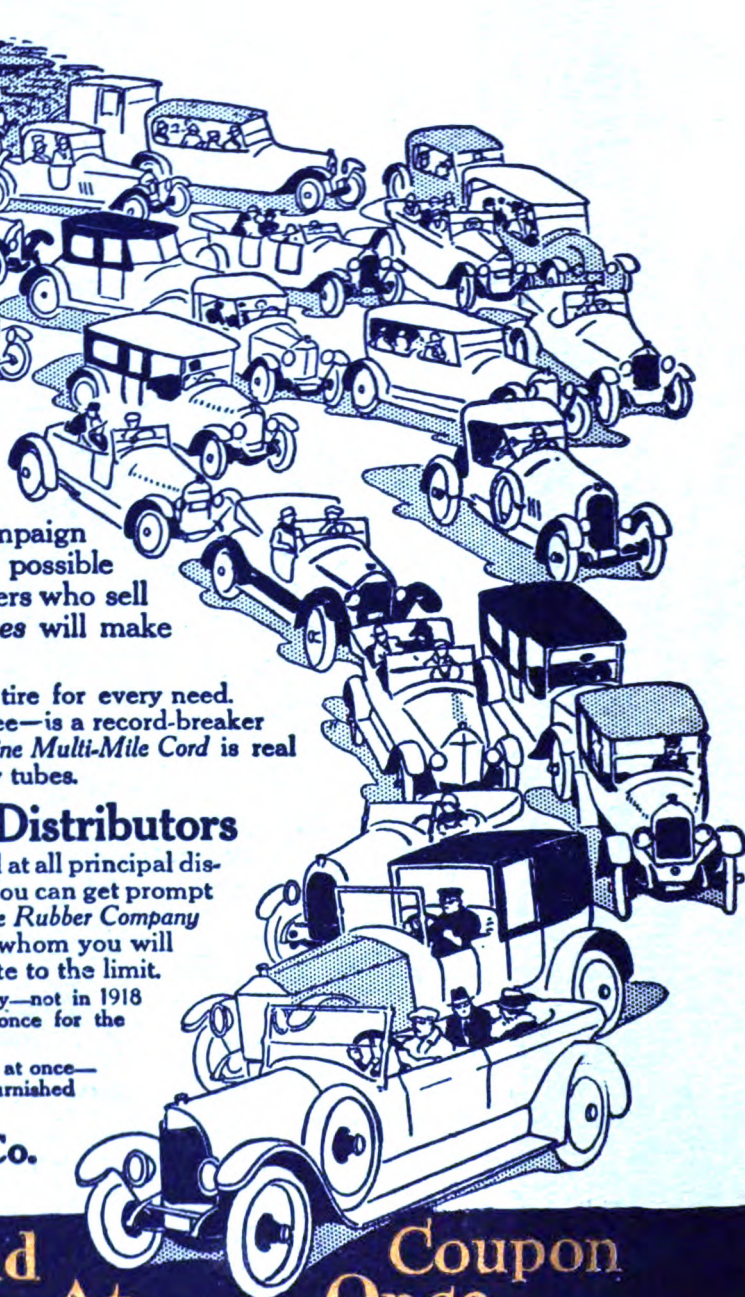
Name.....
Address.....
City..... State.....

(4)

Send

At

**Coupon
Once**





*Diamond
King
of
Grids*

Increased Facilities—

enable us to offer dealers and agencies unexcelled service on shipments to any part of Pacific Coast territory.

Notwithstanding the rapidly increasing demand for "DIAMOND GRID" Starting and Lighting Batteries, we shall continue to make immediate deliveries of batteries for any type of automobile.

*A complete stock of BATTERIES and REPAIR PARTS
carried at the following branches and stock depots:—*

PHILADELPHIA STORAGE BATTERY CO.

1105-7 West Pico
LOS ANGELES

37 Spear Street
SAN FRANCISCO

1512 Eleventh Ave.
SEATTLE

1105 First Ave.
SPOKANE

32 North Broadway
PORTLAND

The Gasoline of Quality



Clean cylinders because Red Crown explodes completely, having correct boiling points in a continuous chain.

Standard Oil Company
(California)

clean cylinders



A GROUP OF LIBERTY DISTRIBUTORS AND DEALERS FROM ALL PARTS OF THE UNITED STATES AND CANADA WHO ATTENDED THE RECENT GENERAL BUSINESS CONFERENCE AT THE DETROIT FACTORY.

Lincoln Co. Rushes New Army Plant.

The Lincoln Motor Co., Detroit, has been organized to manufacture airplane engines and the new Liberty engine, accepted as the government engine in prosecuting the war, will be turned out in large numbers from the start. Henry M. Leland and his son, Wilfred C. Leland, formerly managing directors of the Cadillac Motor Car Co., are at the head of the new airplane project. Laboring day and night, 1,800 men are working to complete the company's new plant in Detroit. Work proceeds simultaneously on each of the nine structures composing the plant. The longest unit is 1,000 feet long and four stories high. Two other units contain 500,000 square feet of floor space. Construction now in sight is costing \$1,000,000.

Lee Selling Company Changes Name.

The Lee Tire Sales Co., Inc., has changed its name to the Lee Tire & Rubber Co. of New York, in order to become more closely identified with the parent company, the Lee Tire & Rubber Co., Conshohocken, Pa. The company's sales offices have been moved from the factory to New York City.

* * *

Van Beaver Now With Saxon.

L. C. Van Beaver has joined the executive forces of the Saxon Motor Car Corporation, Detroit, and will carry out special work as assistant to H. W. Ford, president of the organization. Mr. Van Beaver recently resigned from the Willys-Overland Co. at Toledo, disposing of his home there to remove to Detroit.

Selden Sales Managers Compare Notes

The annual sales conference of division sales managers of the Selden Truck Sales Co., was held at the company's general office at Rochester, N. Y., during the week of October 1st. The Selden Company, under the guidance of Sales Director Hal T. Boulden, has divided the United States into 17 districts, each district in charge of a competent representative equipped to help the dealer to figure haulage problems and in other ways to "sell 'em Seldens." An aggressive sales and advertising campaign was outlined at the meeting and judging from the reports received, it is quite evident that Selden will be a big factor for domestic business.

* * *

"No Price Reduction Yet"—Flanders.

Walter E. Flanders, president of the Maxwell Motor Co. and of the Chalmers Motor Co., says that it is his opinion that the announced reduction in the price of pig iron, steel and some other raw materials will not, for some time to come, affect the retail selling price of automobiles. Mr. Flanders says that the makers have contracted for material at present prices for many months in advance, to protect themselves against delay in deliveries and that the steel mills and blast furnaces are so crowded with government and other work that they will have no opportunity to produce materials at the new prices for many months to come. Mr. Flanders says that his remarks must not be taken as a forecast, but simply as the opinions of one producer of automobiles.

* * *

Packard's Gross Business, \$70,000,000.

The statement is made that the Packard Motor Car Co., after taking a census of its branches, dealers and sub-dealers, found that the gross investment was more than \$20,000,000 in plants and stocks, and that the gross business was \$70,000,000 per year. The organization included in the census have 6,455 employees on the payrolls.

* * *

Homer McKee Forms Own Co.

The Homer McKee Co., Inc., Cleveland, O., has been incorporated by Homer McKee, who resigned recently as advertising director for the Premier Motor Corp. His new company will act as distributor for the Premier car. Associated with him are Aaron Wolfson, of Kahn Tailoring Co., as vice-president, and Fred H. Hoover, formerly connected with the sales of Woods and Rauch & Lang electrics, as secretary-treasurer. Previous to his Premier connection, McKee became prominent with the Cole Motor Car Co. in glorifying the idea of the assembled car.

* * *

Keenan Leaves Guns for Tires.

P. C. Keenan, formerly assistant general sales manager of the Winchester Repeating Arms Co., has been appointed manager of the Chicago branch of the Pennsylvania Rubber Co.

MEET MORGAN ROSS

at the

BELLEVUE HOTEL

SAN FRANCISCO



GEARY AT TAYLOR STS.

The Bellevue has well been termed "more comfortable than home," because it has the spirit of good service and all the facilities that produce it. The name of Morgan Ross is inseparably associated with super excellence of hotel keeping and completes the assurance of perfect satisfaction.

—Accessible—Every downtown attraction within four minutes walk.
 —Comfortable—300 superior rooms with bath. —Enjoyable—a table of unusual excellence. —Reasonable—Very moderate rates. Commendable
 —Real personal service. American plan from \$4.00. European plan from \$2. Wire or write for reservations. MORGAN ROSS, Manager.

G
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Make our booth at the automobile show your headquarters. Our store at 1213 S. Hope Street is just across the street from the show and we invite you to visit us. We carry in stock gears for one hundred and fifty makes of automobiles, also axle shafts. Our prices will interest you.

AUTO GEAR & PARTS COMPANY

1213 S. HOPE ST.

LOS ANGELES

Garford
MOTOR
TRUCKS

Trucks of 1, 1½, 2, 3½, 5
and 6 ton capacity. 4½, 7
and 10 Ton Tractors.
The Garford Road Builder.

STURDY AND SURE

For downright day after day dependability, for extraordinary fuel and oil economy, for the ability to perform the most grueling labor, steadily, smoothly and uncomplainingly, the **GARFORD MOTOR TRUCK** stands away to the fore—absolutely unapproached by anything else on wheels.

This ability to do—this plugging, winning persistence—this uncanny economy, has made the **GARFORD** name a world wide symbol of efficiency.

GARFORDS are successfully meeting hauling problems that few trucks would even attempt.

They are making money for owners in all parts of the world—under every conceivable condition of climate and highway.

And they are making money for dealers. We have room for a few more big calibre men in our selling organization.

Garford Motor Truck Co.
Incorporated

FACTORY BRANCH

310 West Pico St. Main 3383
LOS ANGELES, CALIFORNIA



THREE SHIFTS OF MEN ARE WORKING NIGHT AND DAY ON THE NEW ELGIN PLANT, NOW NEARING COMPLETION.

Stutz Concentrates on 16-Valve.

The Stutz Motor Car Co., Indianapolis, Ind., will concentrate on its four-cylinder, sixteen-valve engine, to be used on four new models this season, while the eight-valve engine, offered optionally last year, will be dropped. The four new models are the Bearcat, \$2,550; the roadster, \$2,550, formerly \$2,375; four-passenger car, \$2,650, formerly \$2,550; and the six-passenger, \$2,750, formerly \$2,550. The first-named model has a wheelbase of 120 inches, the last three models, 130 inches. The cylinders, cast in block, are 4 $\frac{3}{4}$ x6, with Stromberg carburetor and pressure feed. High tension magneto gives ignition and starting and lighting is provided by separate Remy systems. Marked changes have been made in the body design. The body outline is smoother, the hood and radiator lines have been changed and the double cowl has been removed from the four- and six-passenger models.

* * *

Sterns Tube Output 120 a Day.

The Sterns Tire & Tube Co., St. Louis, Mo., recently reached an output of 120 Sterns tubes a day, according to the announcement of William L. Burgess, president of the company. The output will be increased to 200 tubes daily by Dec. 1. The increased production has been made possible by the removal of machinery from the company's experimental plant at Marion, O., to the main factory.

* * *

Wayne Tank Doubling Space.

The Wayne Oil Tank & Pump Co., Fort Wayne, Ind., is erecting three additions to its plant which will double its present floor space. Four acres of land immediately west of the main office building have been purchased for the erection of an addition to the heavy metal tank shop.

* * *

Standard Parts Takes Amer. Bearing.

The Standard Parts Co., Cleveland, O., has taken over the entire amount of the stock of the American Ball Bearing Co. and will pay its own common stock at full value for the American Ball Bearing stock at its book value. The book value of the common stock of the Standard Parts is understood to slightly exceed \$100 a share.

Glide Model Has Few Changes.

The Bartholomew Co., Peoria, Ill., manufacturer of the Glide car, has made no radical changes in their new models. The four- and five-passenger models are listed at \$1,395, with \$400 extra for detachable sedan top for either model. The chassis is 1 $\frac{1}{2}$ inches lower and is of a new pressed steel construction. The tops have been further refined and all models are painted Meteor blue with black hood fenders and gear and ivory white wheels. The engine is six-cylinder, 3 $\frac{1}{4}$ x5, with Westinghouse electric equipment. Other important details are disk clutch, Hotchkiss drive and floating axle and spiral bevel gear.

* * *

Kelly-Springfield to Spend \$5,000,000.

The Kelly-Springfield Tire Co., Akron, O., will expend an approximate total of \$5,000,000 on the plant it will build at Cumberland, Md., instead of the \$2,250,000 at first planned. The manufacturing facilities now planned will have an annual capacity of 400,000 tons of automobile tires and related products. The tire production alone will be from 4,000 to 5,000 a day.

* * *

Du Pont Offers State a Road.

General T. Coleman Du Pont of Wilmington, Del., who some time ago offered to build a boulevard the entire length of the state of Delaware, 100 miles, and to then present it to the state on certain conditions, has recently informed the Delaware state highway commission that he has waived all conditions and will complete the boulevard and present it to the state under no restrictions.

* * *

Autocar Building \$500,000 Addition.

The Autocar Co., Ardmore, Pa., is erecting an addition to its plant which will represent an outlay of more than half a million dollars. The new building is located alongside the new machinery department of the company and will be 75x150 feet, with five stories and basement.

* * *

Pyrene Declares Dividend.

The Pyrene Mfg. Co., New York City, recently declared a dividend of 2 $\frac{1}{2}$ per cent. It is payable Nov. 1 to stockholders of record on Oct. 18.

Mais Develops New Ideas for Fulton.

Albert F. Mais, chief engineer of the Fulton Motor Truck Co., of Farmingdale, Long Island, was the designer and builder of the Mais truck at Indianapolis, America's first internal gear driven truck. Mr. Mais is busily engaged in developing some special features to be embodied in the Fulton truck, and he expects to have these completed for exhibition during the New York and Chicago shows.

* * *

Daniels to Make Master Primers.

E. T. Daniels, secretary of the Master Carburetor Corp., Detroit, has incorporated a new company to manufacture the primer for which the patents have been purchased from the Master company. The new company will erect a factory in Detroit. The primer formerly marketed by the Master Carburetor Co. has been adopted as standard equipment by the Franklin Automobile Co.

* * *

Siegerson to Promote McGraw Sales.

Edmund B. Siegerson, former branch manager at Albany and Buffalo, for the Goodyear Tire and Rubber Co., and later supervising the sales promotion work through the mid-West, has accepted the position of sales promotion manager for The McGraw Tire and Rubber Co., with headquarters at East Palestine, Ohio.

* * *

Jordan to Assemble Trucks.

E. S. Jordan, of the Jordan Motor Car Co., of Cleveland, has announced that his company will shortly commence to assemble trucks from known units of good quality. The details are to be announced in the near future.

* * *

Col. Clifton Aids Liberty Loan.

Colonel Charles Clifton, president of the Pierce-Arrow Motor Car Co., of Buffalo, and of the National Automobile Chamber of Commerce, proposes to invest his entire income, exclusive of actual living expenses, in the second issue of Liberty Bonds. He will pay for them on the installment plan, after deducting from his salary and other sources of income, his actual expenses. The Pierce-Arrow Co. has sent thousands of trucks to the various war fronts.



PISTON SERVICE

Light Weight, Any Make
Cast Iron Pistons
Are the **BEST** by TEST

FINISHED—SEMI-FINISHED—or ROUGH

LARGEST PRODUCERS IN THE WEST

W. H. JAHNS AUTO MACHINE WORKS

908-912 West Pico Street

LOS ANGELES, CALIF.

"NONPAREIL" AUTOMOBILE TRAILERS

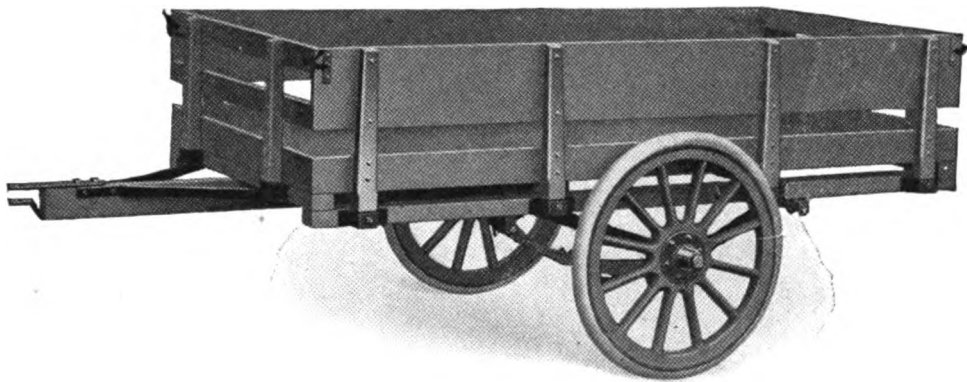
CAPACITIES

A - 1000 lb

B - 1500 lb

C - 2000 lb

**TIMKEN
BEARINGS**



PRICES

A - \$85.00

B - \$100.00

C - \$115.00

**SOLID
TIRES**

PRICES ARE F. O. B. SAN FRANCISCO, KNOCKED DOWN AND CRATED

COMPLETE STOCK ALL MODELS FOR IMMEDIATE SHIPMENT

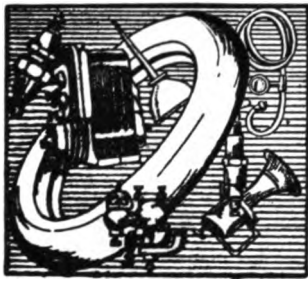
Write for Catalog and Dealers' Proposition

ARTHUR H. HERTZ

Manufacturers Representative

112 Market Street

San Francisco, Cal.



FORD RADIATOR COVER FOR COLD MORNINGS.

The latest device for winter touring in those sections of the Coast States where real winter weather prevails, is the H-M metal radiator cover for Ford cars. One of the most important features of this device is the fact that it is operated from the dash-board of the car, thus eliminating the necessity for the motorist leaving his seat and walking to the front of the car to adjust the cover. Another important point is the adjustment feature. The cover may be entirely closed, half, three-quarter or quarter closed, or entirely open, depending upon weather conditions.

The H-M metal radiator cover is made of sheet metal divided into eight adjustable shutters operated as one. It is attached to the radiator with springs, assuring a tight fit at all times and doing away with the possibility of rattling. The H-M Manufacturing Co., of Indianapolis, manufactures this device.

POLICE APPROVE McKEE LENS.

The McKee Standard Automobile Lens is notable for having, aside from its several other important advantages, the announcement of the Los Angeles police authorities that "the McKee Standard Automobile Lens does not in any particular conflict with the provisions of the (motor vehicle light) statute." The McKee Lens throws a strong beam 500 feet ahead of the car and also furnishes a clear, revealing side light which is thrown at an angle of about 45 degrees directly in front of and to the side of the car. When the car turns a corner, the side light shifts at the same angle with the car and always keeps the road-side well lighted. The McKee lens is of concave-convex shape. The lower two-thirds of the front part of the lens are cut in the shape of a series of horizontal prisms piled one above the other. The upper third is cut in a series of vertical prisms. The lower horizontal prisms concentrate and turn downward the light rays, so that the beams of light point

horizontally not more than 75 feet ahead of the car nor more than 42 inches above street level, complying in every particular with the motor vehicle statute of the California state law. The upper vertical prisms disperse the light sideways, directing at no point a strong beam of light, but a diffused glow. This soft light is obtained, in accordance with the well-known law of optics, by refracting the purple,

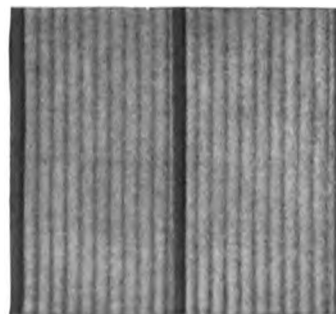


FRONT VIEW OF McKEE LENS.

blue and violet rays, the ones most harmful to the eyes, downward at a sharper angle than the colors at the other end of the spectrum, the red, orange and yellow. The ultimate result is a strong, mellow beam of light. The legal status of the McKee Lens within the state of California in its use as a glare eliminator was recently convincingly proven by the decision of Police Judge George S. Richardson of Los Angeles in the case of the people vs. Ralph G. Whitlock. Whitlock was arrested while driving his car with headlights equipped with McKee lenses. Judge Richardson found Whitlock not guilty and in summing up his decision concluded, "This court finds that light of not more than 36 candlepower projected through the McKee Standard Automobile Lens does not in any particular conflict with the statute."



30 THREADS CIRCULATE ELECTROLYTE IN NEW WILLARD BATTERY.



FORM OF SEPARATORS IN THE NEW BATTERY.

THE "STILL BETTER" WILLARD BATTERY.

The Willard Storage Battery Co., Cleveland, O., has just perfected a threaded rubber insulation for starting and lighting batteries. For years, so it appears, storage battery makers have been struggling with the problem of adapting rubber for insulation in the motor car battery, only to be balked by some one factor. The problem was to use rubber without decrease of voltage, without increasing battery size, without holes that would allow the active material to bridge and without adding to the number of parts.

In solving this perplexing problem the Willard Co. departed entirely from the idea of boring holes and resorted to the use of thousands of tiny threads—196,000 to an insulator—which serve as wicks and thus permit the circulation of the electrolyte. These threads are imbedded in the rubber and are only as long as its insulation is thick—piercing it from surface to surface. The battery solution is drawn through the threads by capillary attraction—but there are no holes through which a contact can be established from plate to plate by "treeing."

After the idea of accomplishing the perfection of rubber insulations with the aid of these myriads of threads was developed, a way had to be devised to put it into operation. This called for special machines, and these the Willard Co. produced. Before the company made general public announcement of the "Still Better Willard Battery with Threaded Rubber Insulation," 35,000 of them had been in use over two years.

A BABY SEAT ATTACHMENT FOR AUTOMOBILES.

The Perfection Mfg. Co., 2700 N. Leffingwell Ave., St. Louis, Mo., is manufacturing and marketing a unique contrivance known as the Rock-a-Bye Auto Seat. The seat consists of a brown washable duck basket mounted on an enameled steel frame, the basket containing two holes



THE "STILL BETTER" WILLARD COMPLETE.



**SEE THE
NEW EMPIRE MODELS
AT THE
LOS ANGELES
AUTOMOBILE SHOW**

*Fours and Sixes
in latest body styles*

*Some splendid territory
is open to good dealers.*

*Be sure to see us at the
Show.*

EMPIRE MOTOR SALES CO.
1142 OLIVE STREET
LOS ANGELES

EMPIRE AUTOMOBILE CO.
INDIANAPOLIS

Power For Fords

THE Bosch-Ford Attachment is an efficiency promoter; it makes possible an easy and mechanically correct installation of the Bosch Magneto on Fords, it results in a positive betterment of the car, it gives more power, more speed and more economy, and, due to even and positive ignition, reduces the wear on the engine and the car in general.

The magneto is a Bosch Magneto, the same quality of workmanship and material as go into the Bosch Magneto supplied to the manufacturers of the highest class of automobiles. The few fittings that are necessary are made in the Bosch Factories, too.

Ford owners and the trade should write for the Bosch-Ford Book; it tells you what you ought to know.

Bosch Magneto Co. - - New York

Coast Branch: 1324 Van Ness Ave., San Francisco

Coast Distributors: E. A. Featherstone, Los Angeles
Ballou & Wright, Portland and Seattle
Kimball-Upson Co., Sacramento

PERFORMANCE

That's what the truck prospect is interested in most of all. If he knows your truck is powered with a Wisconsin Consistent Motor, a big step has been made in its sale. Wisconsin Motors are champions of the world on road and speedway—why not link their reputation to your product? Write for specifications of different types and sizes.

WISCONSIN MOTOR MFG. CO., MILWAUKEE, WIS.
Sta. A, Dept. 314.
Pacific Coast Distributors: Earl P. Cooper Co., 1428 Bush St., S. F., Cal., and 1310 S. Los Angeles St., L. A., Cal. W. F. Kenney, 68 First St., Portland, Ore. Chandler-Dunlop Co., Seattle, Wash.



THE ROCK-A-BYE AUTO SEAT.

through which the baby's legs are inserted.

Two small steel cleats 3 inches long are furnished with the outfit, which can be permanently attached to the back of the front seat of any automobile in a few minutes, and in which the hooks of the Rock-a-Bye Seat are engaged and sustained. All parts that come in contact with the polished surface of the car are protected by means of soft rubber, preventing entirely the marring or scratching of even the most highly polished surfaces.

The Rock-a-Bye Seat is easily and quickly attached at any time by simply inserting the hooks in the slots, and detached by lifting the hooks out of the slots. When not in use, it folds up and easily fits under the seat of the automobile. The device weighs 4 pounds and is not only safe, sanitary and low-priced, but affords baby a comfortable, permanent place in any automobile, instead of being jammed between the occupants anywhere, as heretofore.

HOOD TO DISTRIBUTE "AUTOCLENO."

The Wallace C. Hood Service Bureau recently executed an agreement with the Detroit Autocleno Mfg. Co., to distribute the entire factory output of "Autocleno," the new compound for cleaning and polishing automobiles.

Within the past six months the Hood Bureau saw the big possibilities in marketing factory outputs and now controls the distribution throughout the United States and foreign countries of the following: Tu Ford Valve Tools for Ford and Chevrolet cars, Retlaw Gasoline Gauges for Fords, Dim A Ford Switches, The Pass-E-Z-Y Steering Wheel and Autocleno.

WORKRITE COMBINATION OUTFIT PROTECTS FRAGILE HYDROMETER.

The Workrite Combination Outfit should meet with instant favor from all garage men and car owners who have difficulty in keeping a supply of water pure enough to be used in filling storage batteries. It consists of the Workrite Hydrometer and a glass jar of one quart capacity, made dust- and evaporation-proof by the rubber collar on the Hydrometer which fits into the bottle at all times except when in use. The jar is filled with distilled water and after testing the battery the Hydrometer is put back into the jar. By squeezing the bulb, the acid is rinsed out and the rubber parts cleaned, preventing them from deteriorating. The acid in the water is eventually put back in the battery. The general fragility of hydrometers is protected in the Workrite by the large rubber collar at the top and the square piece at the bottom, preventing the glass from striking any level surface. The square rubber piece also prevents the hydrometer from rolling off the car running-board or any uneven surface. The Workrite Hydrometer is listed at \$1, and the Workrite Combination Outfit at \$1.50.

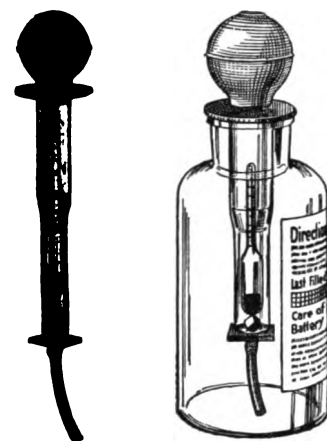
QUALITY TIRES AND TUBES ANNOUNCED.

The Quality Tire & Rubber Co. announces the production of Quality tires and tubes in non-skid and super-cord types. These tires are noted for their low price and the high standard of material and workmanship used in their manufacture. The company claims that the low price has been obtained without sacrificing, in any way, strength, long life and mileage. The manufacturers state that they are already experiencing a very good demand for their product, and an even greater demand is expected as a result of a spirited advertising campaign which is about to be launched.

The Quality Tire & Rubber Co. is located at 1467 Michigan Ave., Chicago. Gordon Ingalls, well known in the tire field, is its president.

FORD RELIEF SPRINGS PREVENT OVERLOAD BREAKAGE.

The Ford Relief Spring is a spring which fastens to the channel iron and rides on the rear camel-back spring of the Ford car, thus relieving it in such a manner as to make it impossible to bump the housing and break the axle, and at the same time, to carry a ton, if necessary. The device does not operate unless the Ford is being overloaded, which is usually the case. But it always acts in stopping excessive tilting, especially in rounding corners. Thus the center bolt



WORKRITE HYDROMETER AND COMBINATION.

is saved from shearing off, the strain is taken from the chassis and the tires are relieved from 80 per cent of their load. Ford Relief Springs sell at \$8 a pair and in two weights—one for passenger cars, carrying up to 800 pounds, and one for commercial cars, carrying up to 2,000 pounds. They are manufactured by the Ford Relief Spring & Frame Supporter Co., New York, which also manufactures the Running-board Truss Rod, which clips to the step-iron near the chassis and fastens to the Ford running-board so as to add greatly to its strength. The Truss Rods sell for \$2 a set.

NITROLENE LUBRICATING OIL.

The Nitrolene Sales Co., which has its headquarters at 1311 South Figueroa St., Los Angeles, will employ a novel advertising scheme to introduce its Nitrolene Lubricating Oil more widely to the public. Instead of spending big money for advertising, such as billboards, etc., during Auto Show week new customers will be given a credit of \$1.00 on his first can of Nitrolene Lubricating Oil, and in this way \$10,000 will be given away.

Nitrolene Lubricating Oil is different from any lubricating oil ever put on the market. Through a special process of refining, the most tenacious, slippery, glairy lubricating oil is obtained—qualities which are not diminished as a result of heat, hard wear, etc. These qualities give a smoother-running engine, with less vibration, reduce friction entirely, increase compression, which means more power or less gas consumption and through chemical affinity loosens carbon deposits. Nitrolene regenerates its own viscosity a thousand times; it wears and wears, and does not break down and become thin and watery.

CUSHIONS YOUR CAR ON AIR—THE GRÜSS AIR SPRING

1918 CADILLAC EQUIPPED WITH GRÜSS AIR SPRINGS
THE LUXURY SHOCK ABSORBER

The elasticity of air, cushioning road shock and floating the heaviest car along like a feather—this is the Grüss Air Spring, the LUXURY shock absorber equipment for QUALITY cars. No "side sway"—Grüss holds the car in a velvet vice that prevents severe leaning or locking of springs through distortion.

CARTER & VANBERG SERVICE STATION

775 Towne Ave. Broadway 8306 Los Angeles



Give 'em air



Tire insurance for one dollar




The first question the tire adjuster will ask is: "Have you kept your tires inflated to the pressure we prescribe?" If you haven't—and the condition of the tire will show whether you have or not—he will allow nothing for their premature destruction or blow-out.

Your tires will not stand up under the weight of your car unless you fill them to the requisite air pressure.

They will not last if you run them underinflated.

Test your air pressure daily with a

Twitchell Air Gauge

AND SAVE YOUR TIRES

Price \$1.25 THE TWITCHELL GAUGE CO.,
1214 Michigan Avenue, Chicago

If You Had A Hole In Your Pocket

Wouldn't you stop the leakage of your money! Cheap plugs are money wasters. A weak spark cannot explode all the gas. Install the

HERZ PLUG

"Bougie Mercedes"

The shooting effect of the explosion chamber behind the Clover Leaf Electrode ensures perfect combustion even of a very lean mixture.

HERZ PLUGS are doubly insulated with Mica and Stone. They are guaranteed. We have stood behind them 23 years.

Ask your dealer for the "Bougie Mercedes" and the Pro-Mo-Tor, a special Herz Plug for Fords.

JOHN D. HOWE, Upland, Cal.,
Pacific Coast Representative

CHANSLOE & LYON CO.,
Los Angeles Fresno
San Francisco Seattle
E. A. FEATHERSTONE
Los Angeles

WEINSTOCK-NICHOLS CO.,
San Francisco
Los Angeles

MCCOY MOTOR SUPPLY CO.,
San Francisco
Los Angeles



HERZ & CO.

245 W. 55th St., New York

**UNION HARDWARE & MET-
AL CO.,** Los Angeles

GAVIN WILLIAMS CO.,
San Diego

KIMBALL-UPSON CO.,
Sacramento

"Oh! What a Difference"

"It adds so much pleasure and comfort to driving a car. I wouldn't take ten dollars for it if I could not buy another." You will say the same if you place one of these gear shift lever extensions on your car

Mellin's Reversible Gear Shift Extension

is a reversible extension lever which enables the operator, with a single arm movement to shift gears easily, rapidly and without changing position or moving the body. Can be attached in a minute and adjusted to any position by simply setting the lock nuts tight.

The Pictures Tell the Story

They illustrate clearly the change in the driving position and show what you avoid by the use of these lever extensions.

Full nickel plated. When ordering state make and model of your car.

Price \$1.50

Excepting for the following cars:
Hudson, Hudson Super-Six, Chalmers, Hupmobile, Oldsmobile, Mitchell and all types having a solid Ball—\$2.00. Dodge or Overland 75-90, \$1.25.

Order through your local dealer.
Send money order for mail delivery.

M. & H. NOVELTY CO.

857 East 24th Street
South 1544 LOS ANGELES

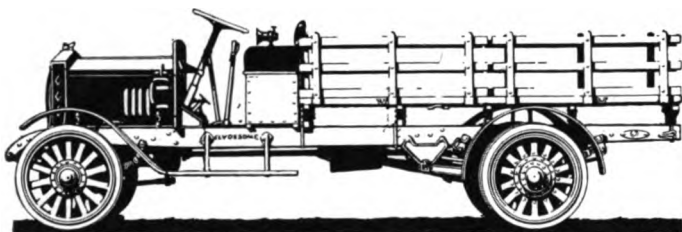


CLYDESDALE



Motor Trucks of $\frac{3}{4}$ Ton to 5 Ton Capacity

THE CLYDE CARS CO., Clyde, Ohio



Number 102, the Sunset Limited, is a fast train

—Leaves Los Angeles at 8:30 every morning, arrives New Orleans in 57 hours and 30 minutes—only two nights on the road. Connection with fast train at New Orleans for New York makes the journey only four nights from here to New York. Also connects with Southern Pacific steamers for New York, and carries through tourist sleeper daily to Washington, D. C.

The SUNSET EXPRESS, another good train, leaves at 3:30 p.m. daily.

SOUTHERN PACIFIC

Ticket Offices
212 West Seventh Street
606 South Spring Street
Pacific Electric Bldg., Main Lobby
Station—Central avenue at Fifth street
Phones: 60641, Main 8322—Day or night

See the Apache Trail



Los Angeles, Cal.—The Akron Tire Shop has been opened at 824 S. Spring and 823 S. Main St. by D. Dayton Dresse, to give Goodyear tire service.—Wilson & Bowen, body builders at 1318 S. Main St., have purchased the equipment and lease of the Superior Mfg. Co., 1325 S. Main, and will run a trimming and top shop in addition to their body building business.—The White Auto Co., distributors of White cars and trucks, will have a two-story garage, 97x155 feet and costing \$50,000, built for them at Eighteenth and Figueroa Sts.—The Safety-Ford Starter Co., E. P. Sommers, Southern California representative, has moved to 942 S. Grand Ave.

* * *

Downey, Cal.—C. E. Rukes has re-opened the Central Garage.

* * *

Lompoc, Cal.—Charles Rudolph has taken the Kissel-Kar agency.

* * *

Sacramento, Cal.—E. Dagner will have charge of Packard truck interests for Earle C. Anthony, San Francisco, in the entire Valley territory.

* * *

Woodland, Cal.—The Standard Garage has added the Peerless car agency.

* * *

Santa Barbara, Cal.—E. J. Boeseke, Packard and Oldsmobile dealer, has taken over the Oxnard agency for the Oldsmobile and now controls sales for that car in San Luis Obispo, Santa Barbara and Ventura counties.

* * *

Porterville, Cal.—Albert Behrens of the Terra Bella Garage has bought entire control from his partner, Henry Rickels.

* * *

Vacaville, Cal.—W. A. Bloodworth, Overland distributor for Yolo and Solano counties, has opened an agency here for Solano county in charge of Frank Dimond.

* * *

Stockton, Cal.—The San Joaquin and California Auto Trade Association held its third annual meeting here recently.

* * *

Long Beach, Cal.—The Long Beach Chandler Motor Co., Chandler agency, will have a garage built for it costing \$7,500.

* * *

Los Angeles, Cal.—The D. F. Poyer Co., Republic truck distributor, has occupied its new sales quarters at 1021-23 S. Grand Ave.



Why Not

'phone for **HUGHES**
when you need first-class
publicity or commercial
PHOTOGRAPHS in a hurry?

938 Hinton Avenue Phones: Main 4268
Los Angeles, Cal. F-5969



LANE'S "H-C" JACK

Easily Operated. You Keep Clean.
Absolutely Dependable.

HANDLE IS JOINTED IN THE MIDDLE FOR
STORING AWAY

PLACED
OPERATED
REVERSED

by one hand from end of handle

No. 14, Lifts 1800 lbs. \$4.50

No. 16, Lifts 3000 lbs. \$6.00

At All Supply Stores, or Prepaid to You
Upon Receipt of Price

LANE BROS. CO., - POUGHKEEPSIE, N. Y.



MARATHON Hand Made Tires
are far less costly, in the end, than the
somewhat less expensive machine-made tires.
We make them entirely by hand so we may
guarantee them as we do. Are you familiar
with our guarantee principle? Write us. Our
plan will certainly interest you.

THE MARATHON TIRE & RUBBER CO.
CUYAHOGA FALLS, OHIO
CANADIAN FACTORY: ST. CATHARINES, ONTARIO

MAKE SURE that your car will
be there when you get back

BY LOCKING IT WITH A

WALKER KE-LES

Safety-vault-like combination that cuts off battery, magneto
and starter circuits, also the gasoline.

NO KEY TO LOSE - NO KEYHOLE TO FIND

\$10 for large cars (\$15 properly installed)

\$5 for Ford and other small cars (\$7.50 properly installed)

See your dealer, garage or repair man. If he does
not carry the Walker Ke-Les, send us his name.

WALKER KE-LES LOCK CO.

Factory: Aurora, Ill. (Dept. M) Sales Dept. Chicago, Ill.

DEALERS MAKE MONEY!

Get the Agency for the "Tonford" truck unit,—one of the
quickest selling propositions you ever tackled. Attached to a
Ford chassis, makes a one-ton truck. Light, strong, economical,
easily handled. Dry goods merchants, furniture dealers, retailers
in almost every line, bottlers, farmers, creameries, all want it.
Find it best possible buy.

\$325 Tonford \$325

TRADE MARK

All the facts that sell the Ford, sell the Tonford. Highest grade
truck attachment made,—easiest to attach,—strongest, most dur-
able. Best constructed truck unit on market,—lowest priced.
Get busy now, while territory is still open. Write today. Learn
how "Tonford" dealers pile up profits.

DETROIT TRUCK CO., Mfgs., Detroit

Save the Nation's Gasoline with the

SUNDERMAN \$6 Vacuum Carburetor

This price maintains on Ford and Metz models

Other cars \$8 and \$10, depending on fittings necessary

This perfect carburetor will save you, no matter what your car,
from 30 to 50% in your gasoline consumption. At the same time
it will give your motor power, speed and flexibility beyond your
fondest hopes.

It's your duty to your country to save gasoline when you can.
It's a dealer's duty to promote the sale of an instrument that will
cheapen the cost of running a car.

Send in your orders now—Fall is a big carburetor season

SUNDERMAN CORPORATION

17 Chambers Street (Dept. C) NEWBURGH, N. Y.
Western Office: 408 Kresge Bldg., Detroit.

Stanwood Adjustable Accelerator Foot Rest



A reliable safety device to prevent *unintentional* rapid acceleration when
driving over uneven crossings or rough roads. Relieves the foot and leg
muscles from constant tension. Permits delicate advancement or retarding
of accelerator.

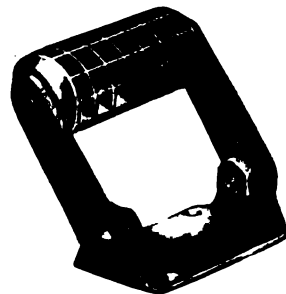
Made with an indented rubber roller vulcanized to a steel tube, revolv-
ing on a steel spindle riveted to the uprights. The pressed steel uprights and
base section are engaged by graduated indentations, insuring stability. These
parts are sherardized and polished to prevent rusting.

Adjustable to various heights and positions, and adaptable to all makes
of automobiles. Superior in workmanship, quality and effectiveness.

PRICE \$1.50 AT YOUR DEALER

or forwarded post prepaid upon receipt of price.

STANWOOD EQUIPMENT COMPANY
307-A Plymouth Court CHICAGO



Patent Pending



OLDSMOBILE RACING CAR **EQUIPPED WITH** **WESTERN STAGGARD RADIATOR**

This is a patented design made entirely of copper that gives maximum cooling results. Its specially constructed water channels and air cells present much larger radiation surface than ordinary radiators.

The Western STAGGARD Radiator is superior to others because its copper construction renders it impervious to corroding effects of alkali or minerals usually found in western water.

Increased cooling surface and resistance to rust and chemical action of water makes the Western STAGGARD Radiator the most durable and satisfactory radiator made.

We also specialize in the repairing of Radiators, Lamps, Windshields, Fenders, Bodies, Pumps, etc. All work fully guaranteed.

Western Mechanical Works
520 W. Pico Street

Bdwy. 2912

Home 60634

San Francisco, Cal.—The McGraw Tire & Rubber Co., Palestine, O., will have a two-story brick building erected on Townsend near Eighth St., to house the offices and warehouse of its Pacific Coast branch.—The Standard Auto Sales Co. has leased quarters at 768-778 Golden Gate Ave.—The Prest-O-Lite Co. has leased ground store quarters in the Masonic Temple Bldg., Oak St. and Van Ness Ave.—J. W. Leavitt & Co., Chevrolet and Premier distributors, have occupied their new building at Van Ness Ave. and Sacramento St.

* * *

Fresno, Cal.—Hintz & Skaggs have secured the Grant car agency for Fresno county from the Frank O. Renstrom Co., San Francisco; the new agency was not formed to sell Oakland cars, as was erroneously stated in Motor West of Oct. 1.

* * *

Portland, Ore.—Talbot & Casey, authorized Ford agents, have occupied a modern two-story building, 90x100 feet and costing \$16,500, at Grand Ave. and E. Ankeny St.

* * *

The Dalles, Ore.—The Barnett Auto Co. has taken the Chandler agency.

* * *

Woodland, Cal.—The Standard Garage will have a \$15,000 building erected for it.

* * *

Fullerton, Cal.—A. F. Oswald has become agent for the KisselKar.

* * *

Huntington Beach, Cal.—T. B. Talbert & Co. have taken the Lexington agency.

* * *

Merced, Cal.—Seel & Brown have re-opened the Studebaker agency here.

* * *

Santa Barbara, Cal.—E. W. Alexander, Ford dealer, will build a garage to cost \$60,000.

* * *

Phoenix, Ariz.—The Leach Motor Car Co., Los Angeles, Cal., Premier, King and Liberty car dealer, has opened a distributing branch here for the state.

* * *

Douglas, Ariz.—Ross & Cunnick have taken the KisselKar agency.

* * *

Prescott, Ariz.—The Pine Garage has taken the King car agency.

* * *

San Francisco, Cal.—The Starr Motor Supply Co. has taken over the Consolidated Auto Supply Co. and the A. & H. Mfg. Co. and will locate at 1135 Van Ness Ave.

* * *

Montesano, Wash.—The Montesano Auto Co., C. N. Wilson and G. W. Foss proprietors, will be enlarged to 100x120 feet.

* * *

Olympia, Wash.—George B. Branch and C. Phaller have bought the interest of J. B. Eshon in the Olympia Garage.

“Exide” Batteries

DISTRIBUTORS

We Repair all makes of Batteries, Generators, Coils, Magnetos and Starters

PROMPT ATTENTION GIVEN TO COUNTRY TRADE

Harry W. Harrison

F-5971 831 LOS ANGELES ST. Main 6582

Main 1076 **CAMBRIA SPRING CO.** F 5233Incorporated
"WE SAVE YOU MONEY"Wheels and Rims
Tire Racks and PlatformsAll Makes in Stock
Wholesale and Retail**AUTO AND TRUCK SPRINGS**Demountable Rims Sold and Applied
Spring Steel Bumpers

SPRINGS REPAIRED, FORGINGS AND FRAMES STRAIGHTENED

Factory: 913-921 So. Santee St., Los Angeles, Cal.

Office: 916-918 So. Los Angeles Street

**Exclusive Distributors**
FOR**FAFNIR Ball Bearings**

(AMERICA'S QUALITY BEARING)

BOWER ROLLER BEARINGS

(THE RIGHT BOWER)

Ball Bearings Reground and Guaranteed Good as New

Pacific Ball Bearing Co.

1406 West Pico Street

LOS ANGELES, CAL.

**A
P E X
Motor Oils**

THE HIGHEST POINT OF EFFICIENCY

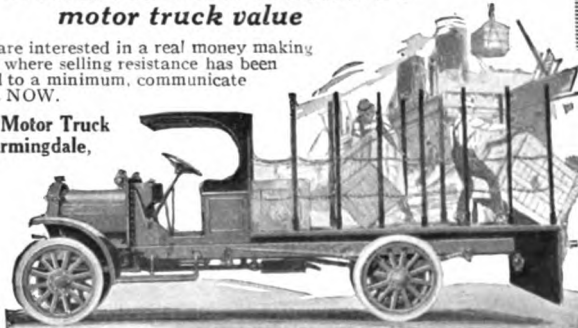
Gasoline "with the Punch"

PUENTE OIL CO.

Oldest Refiners and Producers on the Coast

THE FULTON TRUCK

1½ Ton Capacity

Has created the world's standard in
motor truck valueIf you are interested in a real money making
agency where selling resistance has been
reduced to a minimum, communicate
with us NOW.Fulton Motor Truck
Co., Farmingdale,
L. I.,
N. Y.**Acason**
THE OWNER FIRST
TRUCKSThis company has an attractive proposition to
offer desirable distributors and dealers in Pacific
Coast territory.

1½-ton Truck ..\$2100.00 3½-ton Truck ..\$3000.00

2-ton Truck 2400.00 5-ton Truck 4200.00

Light Tractor\$2500.00

Heavy Duty Tractor 3800.00

ACASON MOTOR TRUCK COMPANY

DETROIT



UNION OIL CO. OF CALIFORNIA

OLYMPIAN
MOTOR CARS114 inch wheel base, cantilever rear springs, full floating
rear axle, vacuum gasoline system and factory equipment
that includes a spotlight, a bumper, a motometer, an igni-
tion lock, an extra rim and an extra tire.37 H. P. motor—smooth running and quiet. Consistently
gives 18 miles per gallon. Full streamline body—double
curve design, slanting windshield.

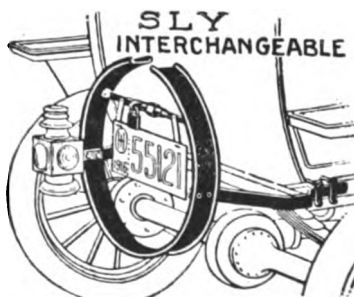
Write for dealer proposition

\$965

f. o. b. factory

OLYMPIAN MOTORS COMPANY,

Pontiac, Mich.

BE UP-TO-DATE ON TIRE CARRIERS**NEW ERA SPRING & SPECIALTY CO.**The strap kinds are ob-
solete and unsightly.
The SLY interchangeable
—Ford or Chevrolet
quickly—neatly does the
trick—take any casing
or demountable—cost no
more. Beware of imita-
tions. If your Jobber
doesn't list, write us for
complete catalogue—of
real Carriers and "Bet-
ter Springs."890 Woodward Avenue,
Detroit, Mich.

Nitrolene

A Power-Full Lubricant FOR AUTOMOBILES

It's different, the most tenacious, slippery, glairy Lubricating Oil, just what you want to keep your motor always in splendid shape. Less Friction, higher Compression, reduces Oil and Gas Consumption



For safe and sane Driving in misty, rainy weather an absolute necessity.

\$1.50

VISIT OUR BOOTH AT AUTO SHOW

NITROLENE SALES COMPANY

1311 South Figueroa St. Los Angeles



INTER-STATE

"The Extra Value Car"

\$850 to \$950

F. O. B. Factory

"A Message from Owners"

Yours for the Asking

WRIGHT MOTOR CAR CO.

1001 SOUTH HOPE STREET

A-5772

Distributors California and Arizona

Main 627

"The Light That Shows the Road"



The S & M is the only Spot-Lite on the market that complies with the California State Law.

SAFETY FIRST—BUY AN S & M

For sale by all Jobbers and Dealers of Automobile Accessories.

25413

S & M LAMP CO. 117 West 36th Place LOS ANGELES

Tacoma, Wash.—The Griffith Motor Car Co. will occupy a garage building 50x120 feet.—The W. M. Thompson Auto Supply Co. has taken the agency for Hassler shock absorbers in Pierce county.—The D. & M. Tire Agency has been opened at 750 Broadway by E. M. Rush with a full line of Mohawk tires.—The Tacoma Auto Exchange has been purchased by C. E. Alden and F. W. White, who will carry a complete stock of accessories and operate a repair shop.—R. L. Olsen has bought the Puyallup Ave. Garage at 1203-5 Puyallup Ave.

* * *

Spokane, Wash.—The Standard Motor Co., Kissel-Kar. Briscoe and Doble dealers, have occupied the salesrooms formerly tenanted by the Harry L. Olive Co.—The Koehring Machine Co. has been opened at 806-12 Third Ave., under the management of Frank A. Vogt.—Ross & Skinner have taken over the agency for Stearns cars.

* * *

Ogden, Utah—The Olympian Motor Sales Co. has been opened here as a sub-agency for the Olympian Motor Sales Co. of Salt Lake City: O. L. Kittinyer has charge.

* * *

Blackfoot, Ida.—O. L. Bowen has been appointed to give service on Prest-O-Lite batteries.

* * *

Wallace, Ida.—The new building to be occupied by the Boomer Garage has been finished at a cost of \$20,000.

* * *

Redlands, Cal.—Fred R. Winnett has taken the Studebaker agency.

* * *

Sacramento, Cal.—The Putzman-Bowman Co. has been succeeded by the Bowman Auto Supply Co., Putzman selling his interest in the company.

* * *

Oakland, Cal.—G. B. Lightner has been appointed manager of the used car department of the Western Motors Co., Maxwell distributor.

* * *

Santa Ana, Cal.—E. Moore and C. F. Candler have formed a partnership to handle the Cole agency.

* * *

Santa Monica, Cal.—J. P. Gardiner has taken over the business of the Santa Monica Garage.

* * *

San Diego, Cal.—The Diamond Garage has taken the Regal car agency for San Diego and Imperial counties.

HAVE YOU A MOTOR CAR?

LISTEN!

See that groove controlling the oil. The groove full of oil forms a dam. Gas cannot get down, surplus oil cannot get up. That's why motor has more power, no carbon.

ISN'T THAT A REASON?



Representatives Write for booklet B. H. G. Paro, 1414 S. Michigan Ave., Chicago; J. W. Van De Grift, 627 Charles Bldg., Denver; The Gavin-Williams Co., 1300 5th St., San Diego, Cal.; Chamberley & Sons, Nashville.

AUTOMOBILE ACCESSORIES CO.,

Baltimore, Md.

Elgin Six

"The Car of the Hour"

Big, Beautiful, Impressive, Powerful, Dependable,
Economical

"Built Like a Watch"

4-Passenger Roadster **\$1095**
5-Passenger Touring Car.....

Subject to Change Without Notice

Write for descriptive catalogues

Elgin Motor Car Corporation CHICAGO U. S. A.



KELLOGG
Engine Driven
Tire Pump

"No Oil Spray With Air"—Guaranteed.
"All Metal Construction"—Everlasting.

Installation Fittings for Practically
All Makes and Models of Cars.

Send for Literature.

KELLOGG MFG. CO.,
ROCHESTER, N. Y.

PHONE:
Main 4062

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A-4062

AUTO AND TRUCK
SPRINGS

WHEELS, BUMPERS
FORGINGS

Wholesale

Retail

UNITED STATES SPRING CO., Inc.

Successors to A. & F. SPRING CO.,

1120-22 South Los Angeles Street, LOS ANGELES.

HARROUN

A car of popular price, designed
by Ray Harroun, in which a new
type of four-cylinder motor develops
revolutionary power and efficiency.

Harroun Motors Corporation

General Offices, Detroit

Plants, Wayne, Mich

Quality in Motor Trucks

It has been our endeavor to create a commercial vehicle
that would excel first of all in the quality of the material
used, and second, in the economy of its operation. :: ::
Our reputation for producing the most lasting truck is
recognized by our many users. :: :: :: :: :: :: :: ::

We offer for your convenience, the following sizes:

1½ Ton 2 Ton 3½ Ton 5 Ton 7 Ton

HURLBURT MOTOR TRUCK COMPANY

133d St. and Harlem River :: New York, N. Y.

MORE POWER --- LESS FUEL



SU-DIG SERIES PLUGS are the only spark
plugs that produce **TWO SIMUL-**
TANEOUS SPARKS in each cylinder when connected
with the ordinary plug. The two opposed sparks
ignite the mixture at two points at once. This
burns the gas more than **TWICE AS FAST**, result-
ing in a wonderful **INCREASE IN POWER** and
GASOLINE MILEAGE, and **WITHOUT ANY**
CHANGE IN THE PRESENT EQUIPMENT.

Free booklet, "How to Get More Power." Write
for it. Please mention car.

CHANSLOB & LYON CO.,

San Francisco, Los Angeles, Fresno, Oakland,
Seattle, Portland.

WEINSTOCK, NICHOLS & CO.,

San Francisco, Los Angeles, Oakland.

SUPERIOR MOTOR POWER CO.,

38 Irving Place

New York

**PRESSED STEEL PARTS FOR
AUTOMOBILES AND TRUCKS**

ESTIMATES CHEERFULLY FURNISHED

The Bossert Corporation UTICA NEW YORK



RIVES AUTO PEDAL

Neverslip Pads \$1 per Set

INCLUSIVE

Cover the entire Field—Rubber Vulcanized
through and locked securely to the metal.
See R. Rives Mfg. Co., Inc. 2187 Woolworth Bldg., New York



LOS ANGELES WAREHOUSE COMPANY

MAKES A SPECIALTY OF **AUTOMOBILE STORAGE**

CARS UNLOADED
DIRECTLY INTO WAREHOUSE

316 COMMERCIAL STREET

A 4727, Main 4787

Fair List Prices
TRADE MARK
Fair Treatment



Cords that are Cords

GOODRICH SILVERTOWN CORD TIRES

BEHOLD the *cord* that has made *cord tires* mean *durability*, *easy-riding comfort*, *mileage*, and *gasoline saving economy* to knowing automobile owners. Behold **CABLE CORD**, the unique cord made especially for the patent-protected two-ply Silvertown Cord Tires, and found **ONLY** in them.

Note the **SIZE** of **CABLE CORD**, its **SUPPLE STRENGTH**, and the **TWO** layers of it **CROSS WRAPPED** into a sinewy tire body.

Wrought of many threads the size of the "cords" of **WEB TIRES**, strong enough to swing the weight of a man, **CABLE CORD** gives Silvertowns a flexible strength which, yielding to the blows of a rough road, comes back without jolt or jar.

Fused with rubber as a cobbler's waxed end is waxed—a perfect weld of cord and rubber **40 PER CENT. RUBBER—CABLE CORD** keeps Silvertown Tires

immune to tire fever (internal friction), the destroyer of many-ply tires.

Therefore, Silvertown Cord Tires, the only *two-ply, cable-cord* tires, outlast many-ply tires with their multiplied tire fever.

Know them by their Red-Double-Diamond trade mark and graceful extra size, the tires you can not afford to deny yourself.

THE B. F. GOODRICH COMPANY

THE CITY OF GOODRICH, AKRON, OHIO

Makers also of the Famous Black Safety Tread Tires

"Silvertowns make all cars high-grade"

Mention "Motor West," Please, When Writing to the Advertiser

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ASTOR, LENOX
TILDEN FOUNDATION

Motor West

THE MOTORING AUTHORITY OF THE PACIFIC COAST

VOL. XXVIII, No. 3

NOVEMBER 15, 1917

\$2.00 A YEAR, 10c A COPY



A SOUTHERN CALIFORNIA BOULEVARD ON A MID-NOVEMBER AFTERNOON.

TOL



Concentrated Power of United States Tires

A machine gun is the concentrated offensive power of many rifles.

In like manner, any one of the five types of United States Tires is also the concentrated offensive power of many ordinary tires.

United States Tires have endurance and power built into them the way those same qualities are put into a machine gun.

They outwear, outlast, "out-mile" any tires you have ever used before.

They give you the lower final cost—cost per mile of service—that you *must* have.

They are the broadly recognized standard of low mileage cost.

If they were not, they would not be plunging ahead so far in sales.

—for sales to the consumer, the car owner, are the index of the "make good" qualities of any tire,

—and United States Tire sales are so phenomenal as to reach the present manufacturing capacity of the largest rubber manufacturers in the world.

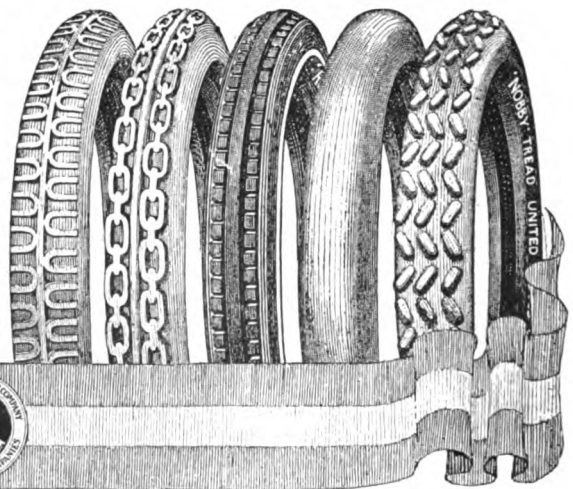
Put a United States Tire on your car and watch results.

United States Tires Are Good Tires

'Royal Cord' 'Nobby' 'Chain' 'Usco' 'Plain'

Also tires for Motor Trucks, Motorcycles, Bicycles and Aëroplanes

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MOTOR West

THE MOTORING AUTHORITY OF THE PACIFIC COAST

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INDUSTRY IN EAST LAUDS S. F. SHOW

Looks Upon Bay City's Annual Exhibition as a Third National Affair—Many Factory Men to Attend.

The annual San Francisco automobile show is looked upon by the automobile industry in the East as the third of the great annual shows, according to Philip T. Prather, president of the San Francisco Dealers' Association, who recently returned to the Coast from an Eastern visit. Prather went East with Don Lee, California state distributor for the Cadillac, and J. E. Brown, Lee's manager in Los Angeles. "Everywhere I found much interest in the San Francisco show," says Prather. "There will be a big delegation of men prominent in the industry at the show."

Ajax Opens Its Northwest Branch.

The Ajax Rubber Co., Inc., has opened a branch house in Seattle, Wash., for the distribution of Ajax tires in the Pacific Northwest territory. Quarters have been opened on East Pike street, near Broadway, with Edward J. Quinn as branch supervisor and R. R. Race, district supervisor. Arthur Munterhas has been named branch manager.

Anti-Glare Lenses in Washington.

Crew-Levick fractors, Noviol Conaphores, Macbeth and McKee lenses are the four motor vehicle headlight lenses and devices which conform to the state headlight law recently passed in Washington, according to the report of the committee filed with Secretary of State I. M. Howell.

Leavitt Takes Oldsmobile For State.

J. W. Leavitt & Co., San Francisco and Los Angeles, have taken the distribution of Oldsmobile cars for the entire state of California. The Oldsmobile car has long enjoyed a splen-

did business in the Golden Gate state and the immense selling organization of the Leavitt firm is expected to greatly enlarge it.

Ross Plant May Move to Coast.

The Ross Automobile Co., Detroit, may move to the Pacific Coast, following its recent going into permanent receivership. Material changes in the company's plant and product are planned. As announced some time ago the company will concentrate on an eight-cylinder model instead of the six-cylinder.

Gates Half-Sole Output Doubled.

The International Rubber Co., Denver, Colo., has doubled the output of its Gates Half-Sole tires following the opening of two new factory units. In addition to these a four-story building containing 90,000 square feet has been contracted for and will be ready for manufacture some time early in 1918.

Master Carburetor Back in L. A.

The Master Carburetor Co., Los Angeles, Cal., has been formed and has purchased the patent rights to the Master carburetor from the Master Carburetor Corp., Detroit. The new company will manufacture the Master carburetor, which originated in Los Angeles, for distribution throughout the United States and foreign countries. The officers of the company are C. G. Harness, president and general manager; D. F. Poyer, vice-president; and E. M. Chandler, secretary-treasurer.

Southwest Motors Takes Columbia.

The Southwest Motors has been formed in Los Angeles, Cal., to take the agency for Columbia cars. Sales quarters have been opened by the new company at 607 Seventh St.

Seeks Moon Agents for Northwest.

E. N. Sanders, representative for the Moon Motor Car Co., recently visited Seattle and Portland in order to arrange for dealers to handle the Moon car in those territories.

FACTORIES ABLE TO MEET DEMAND

S. P. Official Says Automobile Companies Can Supply Government and Public—Railroads Can Furnish Cars.

"So far as I could determine the large automobile factories will be able to meet the Government's needs for airplanes and trucks without interfering with their ability to meet the demand of the country," says Charles C. Pratt, automobile agent for the Southern Pacific Co. and well known as one of the best informed traffic men identified with the motor car industry throughout the United States. Pratt's opinion is the result of a recent two months' tour through the motor vehicle manufacturing centers of the East and Middle West. "Practically every company plans to have a bigger production next year than this year. Unless unforeseen difficulties arise, it is felt that the railroads will be able to meet the needs of the manufacturers for transportation equipment. Whether such material as steel or nickel will continue to be available for automobile manufacture, of course we cannot tell, but no shortage among the manufacturers is reported now."

Benson Opens San Francisco Branch.

The W. J. Benson Co., San Jose, Cal., dealer for Maxwell, Stephens and Chandler cars, has opened a sales and service station in San Francisco in charge of Harry Wolverton, former manager of the New York American and the San Francisco baseball teams.

McCarty Heads N. W. Studebaker.

E. H. McCarty has been appointed manager of the whole Studebaker branch for the Northwest located in Portland, Ore., succeeding L. A. Keller, who was recently promoted to act as manager of the company's Los Angeles, Cal., branch.

HOW REVENUE ACT AFFECTS TRADE

N. A. C. C. Bulletin Shows Late Rulings of Treasury Department in Reference to Makers and Dealers.

The National Automobile Chamber of Commerce, Inc., has issued the following bulletin of late rulings of the Treasury Department on provisions in the War Revenue Act affecting automobile manufacturers and dealers. Until official rulings are made, the following may be taken as a guide:

1. Cars for the United States Government: The Treasury Department has decided that automobiles sold by manufacturers to the United States Government on contract at contract prices cannot have the tax added to the price. It was hoped that under Section 3464 of the Revised Statutes, such automobiles could be relieved from the tax through an application from the branch of the Government purchasing the article. The Treasury Department rules that this cannot apply on present contracts.

2. Provision for Adding Taxes to Contract Price: If not already provided for in contracts, our counsel advises the addition of the following: All taxes, imposts or other charges whatsoever hereafter added or imposed by the Federal Government or any State government shall be added to the contract price.

3. Floor Tax: A late ruling of the Treasury Department provides that where separate books and a separate stock are kept of cars to be sold only at retail and distinct from a line of cars which are sold both wholesale and retail, the retail stock of cars is not taxable.

4. Example: The "Smith" Automobile Co. handles Maxwell cars as a distributor for San Francisco, selling at both wholesale and retail. On all Maxwell cars on hand October 4, they must pay the floor tax. If the same company, however, has a separate contract with the Elgin Motor Car Co. for selling Elgin cars at retail only and there are separate contracts, separate accounts, and separate books of stock, then the Elgin cars under the retail contract are exempt from the tax. If both the Elgin and the Maxwell cars are sold at wholesale as well as retail, then all the cars the wholesaler-retailer had on hand October 4 are subject to the floor tax.

5. In like instance, the "Brown" Automobile Co., a separate corporation of the factory but owned by the factory, does a wholesale and retail

business in Olympian cars in Los Angeles. It is taxed on all the cars it had in stock on October 4. It does, however, have retail branches at Sacramento, Fresno and San Diego, which sell cars at retail only. If the cars of those branches are held separate and accounts held separate, the retail stocks are exempt from floor tax.

6. The "Walton" Automobile Co. of Cleveland has branches throughout the country that are not separate corporations, but do business as the Walton Automobile Co., a corporation of Ohio. Such branches, whether they do a wholesale or retail business, are selling the stock of the home manufacturer and are subject to a 3 per cent manufacturer's sales tax on the price at which sold.

7. Automobile manufacturers should notify their wholesalers of the above rulings. In case any excess payments have been made the Internal Revenue Department has a right to refund upon application.

8. Second-hand Cars: It has been ruled definitely that second-hand cars, or used cars, are not subject to tax. Demonstrators, that is, new cars taken for demonstration purposes, are subject to tax.

9. Completing Automobile by Placing a Body on the Chassis: The Treasury Department is inclined to rule that a party who buys a chassis and then completes the automobile by the addition of a body is a "producer" within the meaning of the law, and subject to the 3 per cent tax on sale by such "producer" of the article so produced. This will apply to truck attachment companies which produce an automobile from second-hand parts and certain attachments. Also to a wholesaler who buys chassis and has bodies made for them and attached. Under this ruling, a dealer who buys a chassis and then buys bodies elsewhere for attachment is subject to a tax of 3 per cent when the articles are sold. There will be further consideration of this, because in most instances a tax will have been paid on the chassis when sold by the manufacturer; treasury officials say that in such cases a refund will be made.

10. The pressure of applications for official rulings is so great that it will be some time before they can be secured from the Treasury Department, but the above is given to show the preliminary thought of the officials, which in most cases is expected to prevail.

Stevens Made Hartmann Manager.

A. E. Stevens has been appointed general manager for Martin M. Hartmann, San Francisco, Cal., distributor of Apperson and Elgin cars.

Keller Heads L. A. Studebaker.

L. A. Keller, former manager of the Studebaker branch in Portland, Ore., has succeeded Paul G. Hoffman as manager of the company's Los Angeles branch. Hoffman resigned several months ago to go to American Lake. Keller has been with the Studebaker for a number of years, having sold the famous old Studebaker wagons, which then held just as high a place among horse-drawn vehicles as the Studebaker car among automobiles today. After the company began building motor cars Keller was made assistant manager at Portland, Ore. Shortly after he was promoted to manager at the Omaha, Neb., branch, and five years later returned to the Pacific Northwest as manager of the Portland branch.

Bentel to Concentrate on Body Plant.

George Bentel, Los Angeles, Cal., Mercer dealer, will concentrate his energies on his large automobile body building establishment and make a partial retirement from the car sales agency field. The new Bentel body building plant on Grand Ave. has already become famous throughout the entire Coast territory for the strikingly original and artistic bodies it has turned out for Western customers. The company will continue to handle the Mercer car, with which it has been identified for several years.

Campbell, of Paige, Promoted.

J. H. Campbell, district manager for the Paige-Detroit Motor Car Co., has been promoted to take charge of the Paige Sales Co., Dallas, Tex., covering Texas, Oklahoma, southwestern Kansas and a part of Mexico.

Peerless Agency in Portland.

The D. C. Warren Motor Car Co., Inc., Portland, Ore., will handle the Peerless car for Oregon and southwestern Washington. A. M. Stone has been named sales manager.

Carlisle Tires in Northwest.

The Pacific Tire & Rubber Co., Seattle, Wash., has taken the agency for Carlisle Cord tires for Washington and Oregon.

Atterbury Truck in Northern Cal.

Max Olsen, Western district manager for the Atterbury Motor Car Co., has appointed Harding & Keene, San Francisco, to distribute Atterbury trucks in the Northern California territory.

Olds Sales Head a Coast Visitor.

P. L. Emerson, sales manager of the Olds Motor Works, was a recent visitor in San Francisco.

Coast Wholesaler for Westinghouse.

The Electric Equipment Co. of Los Angeles and San Francisco has been appointed sole distributor and official service station for the entire line of Westinghouse automobile electrical equipment on the Pacific Coast. Negotiations were started with the Westinghouse Electric & Mfg. Co., Pittsburgh, Pa., some time ago by Ray Thomas, president of the Electrical Equipment Co. About twenty-five well-known makes of cars have the Westinghouse as standard equipment.

Conditt Heads L. C. Buxton Sales.

W. B. Conditt has been appointed sales manager for the Lynn C. Buxton Co. of Los Angeles, distributors of Stearns-Knight cars.

Utility Truck in Los Angeles.

The Dawes Motor Truck Co., Los Angeles, Cal., has taken the agency for the Utility truck attachment, which is adaptable to the Ford or other light cars for converting them into motor trucks.

Service Truck Agency for Southwest.

The Service Truck Co., Los Angeles, Cal., has undertaken the distribution of Service trucks in the Southern California and Arizona territories. The company is headed by W. F. Ziegler.

Garbe Directs Studebaker in N.W.

W. C. Garbe, president of the Oregon Motor Car Co., Portland, Ore., will look after Studebaker interests in Spokane, Wash. E. H. McCarthy will act as Northwest supervisor for the Studebaker Corp.

Portland Studebaker Branch Moves.

The Portland, Ore., branch of the Studebaker Corp. of America has located in new quarters at Tenth and Glisan streets, where it occupies three floors, containing a total of 50,000 square feet of floor space.

Fahy-Atterbury in New Home.

The Fahy-Atterbury Sales Co., Los Angeles, Cal., Ford car agency, recently moved into its new building at 1036 S. Grand Ave. The building has two stories and is faced with white brick. Last year the company did \$500,000 worth of business, selling 650 new and 400 used Ford cars.

New Pilot Agency for South.

The Aston Motor Car Co., Los Angeles, Cal., has taken the agency for the Pilot car for Southern California.

Leach Opens Arizona Branch.

The Leach Motor Car Co., Los Angeles, Cal., has opened a branch in Phoenix, Ariz., to cover the state of

Arizona for the distribution of King, Premier and Liberty. The branch is under the management of George W. Campbell and E. P. Hughes. The Dort, the fourth car handled by the Leach firm, will be distributed in Arizona by the Kissel Auto Co., Phoenix, Ariz.

Ross to Represent Dunlop Tyres.

John Jay Ross, 607 Figueroa street, Los Angeles, has just closed negotiations whereby he will represent Dunlop tyres in Southern California. Mr. Ross has also taken on the representation of the Armstrong tubes, manufactured by the Armstrong Rubber Co., of Newark, N. J. These tubes are fitted with the Kahn automatic valve, which permits of a tire being inflated to any desired pressure, and which gives warning when that pressure is reached.

Waterhouse Takes Denby in Seattle.

The Frank Waterhouse Co., Seattle, Wash., Signal truck dealer, has added the agency for the Denby truck.

Crow-Elkhart Distributor for No. Cal.

The Crow-Elkhart Sales Co., San Francisco, Cal., has been formed to handle the agency for the Crow-Elkhart car in the Northern California territory. The new firm is headed by F. T. Mooney. F. M. Murray is secretary and E. R. Smith, sales manager. Sales rooms have been opened at 714 Van Ness Ave.

Little & Kennedy Add Marmon.

The Little & Kennedy Co., Tacoma, Wash., Studebaker car and truck and Federal truck dealers, has added the agency for the Marmon car. R. P. LeFeber has been placed in charge of Marmon and Federal sales.

Scripps-Booth in W. Washington.

W. S. Dulmage, Seattle, Wash., King and Chevrolet car distributor, has added the Scripps-Booth car agency for the Western Washington territory.

Sommerville to Handle Nelson Car.

A. G. Sommerville, Inc., of San Francisco, will handle the Nelson car in the Northern California territory.

Velie Agent in Tacoma.

Joe's Garage, Tacoma, Wash., has taken the agency for Velie passenger cars and trucks.

Scott Joins Mortgage Guarantee.

J. Walter Scott, formerly Detroit, Mich., manager for the Automobile Trade Journal, Philadelphia, Pa., is now connected with the Mortgage Guarantee Co., of Los Angeles.

WANT DOBBIN OFF STREETS OF S. F.

Ordinance Before Board of Supervisors Would Restrict Their Use to Motor-Driven Vehicles Only.

Prohibition of the operation of horse-drawn vehicles on the streets of San Francisco is the purpose of an ordinance which, it is understood among motor car dealers, will shortly be presented to the local board of supervisors. Arguments advanced in favor of the proposed law are that it would greatly relieve downtown traffic congestion, make the city cleaner and more healthful and decrease the death rate, eliminate stables and substitute garages, thereby increasing the value of real estate, and would mean less work for the street cleaning department and, therefore, less burden for the taxpayer.

Boone Retires From Firestone Field.

Benjamin J. Boone, Portland, Ore., Firestone tire dealer, has sold his tire business to Jack Fletcher and L. James and will devote his activities to handling commercial automobile paper and financing dealers in the Oregon territory.

Harry Heard at the L. A. Show.

Harry Heard, Pacific Coast factory representative of the Standard Motor Truck Co., Detroit, Mich., makers of the Standard truck, is in Los Angeles attending the show. He has placed the Standard in the Pacific Northwest, and during his stay in Southern California expects to close with a reliable Los Angeles firm. He reports the demand for the Standard in Oregon and Washington as growing rapidly.

Seattle Kissel Moves Headquarters.

The Pacific KisselKar Co., Seattle, Wash., recently moved its distributing headquarters from Portland to Seattle, under the personal management of A. S. Robinson.

Lippard-Stewart Truck in Spokane.

The Herman J. Rossi Co., Spokane, Wash., Scripps-Booth dealer, has added the agency for Lippard-Stewart trucks. George Beverly has been appointed manager of the Herman J. Rossi Co.

Manages G. M. C. in Tacoma.

Russell D. Horning has been appointed manager of the truck department of the Mueller-Harkins Co., Tacoma, Wash., Buick and G. M. C. truck distributors.

OREGON CLOSE TO 50,000 CAR MARK

**Registrations Up to October 31 Show
Gain of 14,662 Automobiles Over
the Same Date Last Year.**

Automobile registrations in Oregon on Oct. 31 of this year show a gain of 14,662 cars since the close of the corresponding month of 1916, according to figures compiled by Secretary of State Olcott. October alone of this year saw 289 more cars registered than October, 1916. Total registrations up to Oct. 31 this year were 48,312, as against 33,650 recorded on Oct. 31, 1917. The state's revenue from license fees was \$194,937, as compared with \$145,036 for the 1915-16 period. Under the law these fees are devoted to good roads purposes, going into a sinking fund to retire road bonds. October registrations this year were 1,225, as against 936 in Oct., 1916. This is ordinarily the dull season for the motor vehicle market in Oregon, but the demand continues so steady that dealers in the better-known cars, particularly the popular-priced ones, are finding themselves sold out faster than they can get shipments from the factories. There is more than a possibility that motor car registrations in Oregon will reach the 50,000 mark by Dec. 1. The total number of registrations for all of last year was only 33,917.

Handles Nitrolene Oil in No. Cal.

G. H. Harkrader, who formerly was central Pacific Coast retail distributor of Hudford Truck Attachments, has now taken over the distribution of Nitrolene Motor Oil for Northern California north of Tehachapi, and has warehouse accommodation, as well as an office, at 106 Stewart street, San Francisco, under firm style of Nitrolene Oil Sales Co.

Olympian Dealer in San Francisco.

The California Motor Sales Co., 1319 Van Ness Ave., San Francisco, Cal., has become distributor for the Olympian car. L. D. Allen is the manager of the new concern. The company has ample finances and its contract calls for 2,000 Olympian cars, of which 100 are already en route to meet the Coast demand.

Nash Distributor in Tacoma.

Davis-Dunn, Inc., Tacoma, Wash., has been incorporated by George Davis and George D. Dunn, to distribute the new Nash line of cars, formerly the Jeffery, in Pierce county and southwestern Washington.

Phila. Storage Battery in S. F.

The San Francisco branch of the Philadelphia Storage Battery Co. is now installed at 37 Spear street. This is on the west front of the new Southern Pacific building, which is admirably located for a wholesale business of this kind, being situated at Spear and Market, only two blocks from the Ferry Building and consequently close to all steamship and railway terminals. The Philadelphia Storage Battery Co. has installed very complete equipment for the efficient handling of its "Diamond Grid" batteries and for the proper care and maintenance of the new batteries carried in stock. C. L. McWhorter, the Pacific Coast manager, states that his organization is now equipped to give unexcelled service in the way of immediate delivery of starting and lighting batteries to fit any make or model of automobile.

Gets Olympian for Southern Cal.

Geo. W. Smith & Co., Inc., 952 S. Grand Ave., Los Angeles, have secured the representation of the Olympian car for Southern California and Arizona, under the California Sales Co., Pacific Coast agents, whose headquarters are in San Francisco. Geo. W. Smith and Ray C. O'Brien, who constitute the firm, have been in business in Los Angeles for a number of years, and have already made an excellent start toward putting the Olympian on the map in their territory. Their exhibit space at the Los Angeles Show was secured at the last moment, and their only exhibition car was driven from San Francisco to the show, reaching the Billy Sunday Tabernacle just as the doors opened. The distance was covered on a fuel consumption which averaged 21½ miles to the gallon.

Stone Heads D. C. Warren Sales.

A. M. Stone, well known in Los Angeles, where he was formerly connected with the Stutz car agency, has been brought to Portland by D. C. Warren as sales manager for the D. C. Warren Motor Car Co., distributors for Peerless and Velie cars. The D. C. Warren Motor Car Co. recently added the Peerless car for Oregon and southwestern Washington.

Starr Heads Northwest Willard.

Chester H. Starr, Seattle, Wash., has been appointed Northwest district representative for the Willard Storage Battery Co.

Stutz Agent in San Diego.

W. Edward Shaw, San Diego, Cal., Haynes and Scripps-Booth dealer, has added the Stutz car agency.

SHIP-BUILDING AN AID TO CAR SALES

Dealers in the Pacific Northwest Report Times so Good That Workmen are Buying Automobiles.

Reports of the industrial prosperity prevailing in the Pacific Northwest would seem to be the result of crops assured in the farming district and from the war program of the nation, especially as regards the ship-building and lumber industries. One Portland, Ore., motor car dealer, the Braly Auto Co., Franklin car distributor, reports that its October business last month broke all previous records for that month. Twenty Franklin cars were sold by this firm during October. Another official connected with a Northwest agency on visiting the ship-building yards in Seattle was astonished to learn that the strings of fine cars standing in the yards were owned by workmen who were "worrying" along on from ten to twelve dollars a day.

Outside-City Jitneys Regulated.

Regulations governing the operation of jitney busses in the state outside of the cities have been recently established by the California Railroad Commission. Under the new regulations all jitneys and stage companies must file a statement of rates, time schedules and proposed character of service with the Commission within sixty days. Uniform rates must be uniform and all passes, except when issued to officials, are prohibited. Refunds are not allowed. Time schedules must be posted at stations and strictly adhered to. Safety devices which will keep the cars in safe and sanitary condition are obligatory and include speedometers, lights, extra tires, brakes, skid chains, warning signals and fire extinguishers. Drivers must be at least 21 years old, of good character and will not be allowed to be at the wheel more than ten hours in any twenty-four hours.

Sohner Heads Portland Ajax Branch.

The Ajax Tire Co. is now represented in Portland, Ore., by a factory branch. It is in charge of Frank Sohner, who handled the Ajax line when it was carried for this locality by Hughson & Merton.

Barshar Co. to Handle Liberty.

The Barshar Motor Co., Seattle, Wash., has been formed to distribute the Liberty six-cylinder car in western Washington. F. H. Barshar is head of the company and D. E. Barshar, secretary and treasurer.

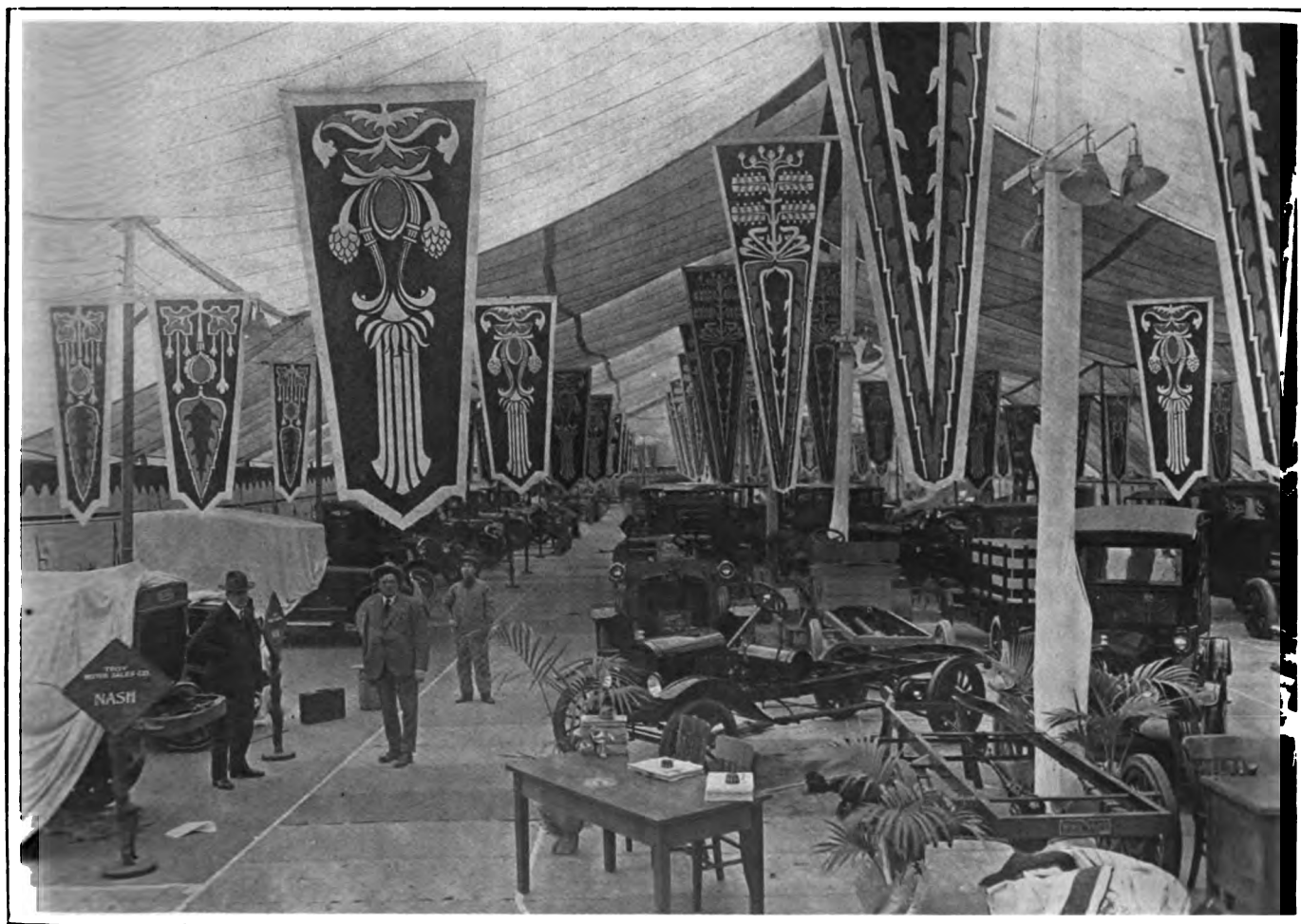
Los Angeles Show an Index to Pacific Coast Prosperity

Every Square Inch of Exhibiton Space Taken Long Before Opening of Doors—Over 11,000 in Attendance on First Day—Many Sales Recorded by Car and Accessory Men—Insistent Demand That Show Be Extended for Several Days

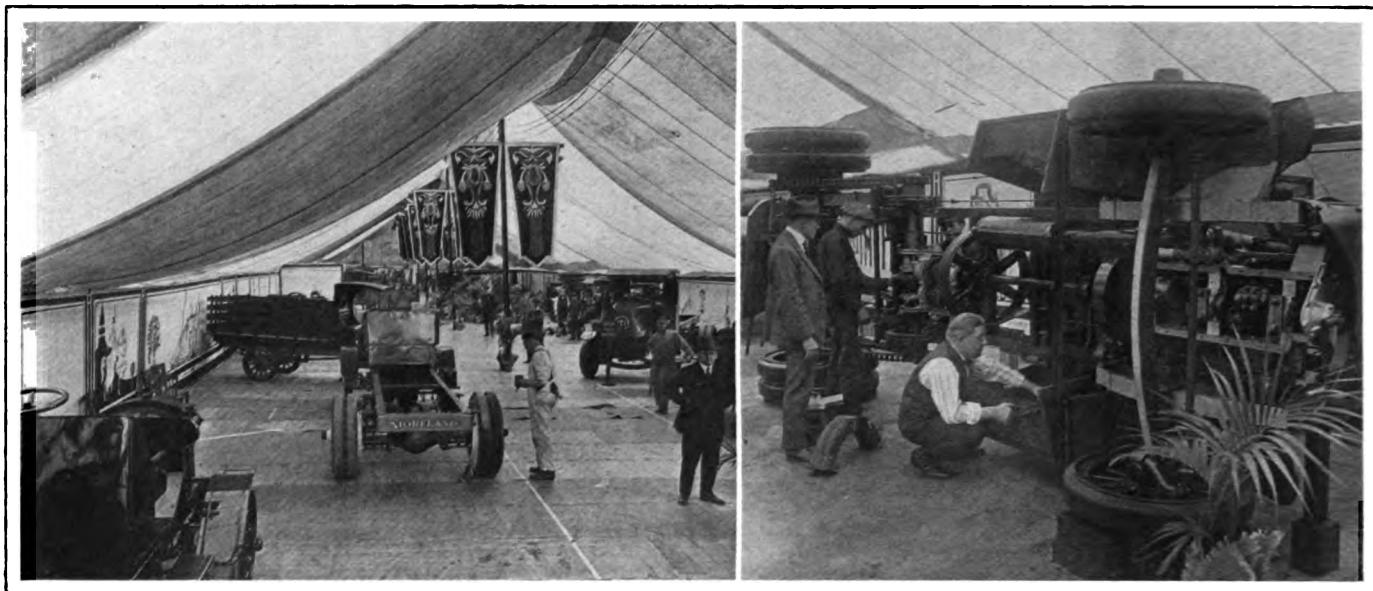
THAT the seventh annual Los Angeles Automobile Show eclipses by a wide margin the exhibition of last year in size, number and round-figure money value of exhibits requires but a casual and general tour among the great muster of sleekly appointed models collected under the raftered shelter of the former Billy Sunday Tabernacle, and in the three tent annexes, taking in almost the entire block bounded by Pico street, Grand Avenue, Twelfth street and Hope street. The colorless detail of mere size is forgotten, however, in the general appearance of the present show. From the highest-priced twelve-cylinder exhibit down to the smallest-dimensioned four-cylinder display the same unbroken consistency of artistic creativeness is present. Both show management and exhibitors have apparently worked to outdo each other in the point of compelling attractiveness and good taste.

The official opening took place Monday evening, Nov. 12, at 9 o'clock, when Frederick T. Woodman, mayor of Los Angeles, made the dedicatory speech. The total value of the exhibits is estimated roughly at one million

dollars. Two hundred and fifty-seven cars and forty-seven trucks are contained in the total area of 125,000 square feet of space which make up the tabernacle and the three canvas adjuncts. Last year 210 passenger cars and 40 trucks were represented. While possibly surpassed in size by the New York and Chicago affairs, the Los Angeles show is the equal in artistic appeal of any of the national shows. In the Tabernacle, which naturally serves as the main building, the spectator walks through a palm forest, reinforced by a multitude of potted plants and growing flowers in carrying out the illusion of a luxuriant garden. The electric lighting arrangement throughout every division of the show shows a skill and unstinted profuseness which far surpasses this feature in any previous show held on the Pacific Coast. The effect of the setting is to strike the visitor with a certain amount of pleasurable surprise as he comes upon each display. The sawdust-besprinkled trails laid out for the Rev. Billy Sunday's converts is still traveled by the visitor, but this time upon a hard floor of boards overlaid with silent fabric. The main entrance to the show is



VIEW OF EAST TENT TAKEN JUST BEFORE THE OPENING GIVES AN EXCELLENT IDEA OF DECORATIVE SCHEME.



PART OF TRUCK EXHIBITS IN NORTH TENT—MACK CHASSIS TURNED SIDEWISE TO SHOW OPERATION.

through the south tent, which faces on Pico street. The center of the area contained in this tent is held by an armored "tank" car, which carries out realism to the extent of marks on its sides caused by shell and musketry fire. The east tent houses exhibits of passenger cars and a few displays of commercial motor vehicles. The north tent is given over to the exclusive display of motor trucks of high and low degree, from the solid- and triple-tired juggernaut type down to the light converted delivery car. The wall decorations of the show have been done in panels of peculiar futuristic conception, executed in black and white. From overhead are suspended grotesque pendants done in the same futuristic style.

Each individual display has been prepared with a skill and artistic viewpoint which shows a wonderful advance over all previous local displays of motor cars. Especially notable are the white and brown Cadillac, the orange and black McFarlan sport model, the salmon-pink Saxon model, the Leach Motor Co.'s display of Premier, Liberty, King and Dort car chassis and the Paige and Peerless display. A number of cars comparatively new to the Pacific Coast are making their first appearance. Among them are the Olympian car, the Columbia six and the

Daniels eight. In the truck division the Moreland Motor Truck Co. exhibited a Los Angeles-built military truck, painted red and black, the red, which predominated, showing the locally made parts. This year's exhibits betray the unwillingness of manufacturers to follow in one groove, the principles of design are represented which differ from each other as widely as the poles. The frequent absence of running-boards on the newest models and the freedom with which angular lines are allowed seem to be the latest developments in car bodies.

Of special interest in the Franklin car booth of the Ralph Hamlin exhibit at the Los Angeles show is the antique 10-horsepower Franklin model which crossed the United States in 1904. The little relic, air-cooled as cars of this make have always been, was driven to the Pacific Coast by L. L. Whitman in 29 days, a record which stood for two years thereafter. Incidentally this performance was the direct cause of Hamlin's long connection with the Franklin company as its distributor in Southern California, dating from 1905. He is probably the oldest dealer west of the Rockies handling the same car continuously, and possibly the oldest Franklin dealer in the country.

Among the list of distinguished visitors connected with the automobile industry who have arrived in Los Angeles for the show are H. H. Rice, sales manager for the Nordyke & Marmon company, and W. W. Sapp, Pacific Coast representative for the Columbia Motors Co. Don Lee, head of the Cadillac distributing agency for California, came down from San Francisco to attend the opening. One of the Olympian cars on exhibit was driven down from San Francisco under its own power within 20 hours after word had been received that the intended show exhibit was stalled somewhere in New Mexico. How universal war conditions have become is impressed upon visitors at the door, where a war tax of three cents was added to the admission price.

William L. Hughson, president of the Pacific KisselKar Co., is a distinguished visitor from San Francisco.

Another visitor is J. Hirsch, Western representative for the Hall and Truxton factories.

The attendance during the first three days of the show has been estimated to exceed 25,000.



"TANK" AT MAIN ENTRANCE GIVES SHOW WARLIKE ASPECT.

Early Days of Motor Car Industry in Los Angeles

Reminiscences Evoked by Opening of Seventh Annual Show Indicate Vast Strides in Eighteen Years

THE last issue of "Motor West" paid brief attention to the inception of the automobile industry in Los Angeles in the shape of the sale of an electric runabout by W. K. Cowan to a Los Angeles man named Steve Hall. That was only 18 years ago, and though it may seem premature to start reminiscing about an industry less than a score of years old, yet that is what this article proposes to do. Perhaps it is not out of place after all, for the automobile business has moved so swiftly in its brief span of life that 10 years in the automobile business may easily show more of change and progress than twice that length of time in a more conservative line of endeavor. Show week is a week of reminiscence, anyhow, when some of the old-timers gather together in a palm-shaded booth and compare present affairs with the crude beginnings of the business of only a decade and a half ago.

Steve Hall was not satisfied to own a single runabout for his personal use, so Mr. Cowan, dean of the industry in Los Angeles, recalls. He conceived the idea of running an automobile service from Los Angeles to Lucky Baldwin's ranch at Arcadia, and transporting tourists after the very fashion that the big rubber-neck wagons follow today. Hall's idea was excellent, but he was a little in advance of his time.

Mr. Cowan had the just the thing he wanted for this line of work in the shape of an electrically-driven monstrosity fashioned after the design of the old-fashioned tally-ho. In an unguarded moment the Waverley Electric factory had designed four or five of these peculiar animals, and for some months the four or five that they built had been scattered over the country in various factory branches vainly seeking buyers.

Mr. Cowan closed a deal with Hall to take the lot of



THE FIRST MOTOR DELIVERY WAGON IN LOS ANGELES WAS ALSO A WAVERLEY ELECTRIC, SOLD IN 1902 TO INGERSOLL & ESLER.

them, and wrote in haste to the manager of the Waverley factory to ship the fleet. And the Waverley factory official whom Cowan carried on the negotiations with was none other than one J. S. Conwell, president of the Los Angeles City Council and presiding genius of the Auto Show of 1917.

Mr. Conwell hastily called in his flock of electric tally-hos, repainted them, fixed them up and shipped them to Los Angeles. They did not prove an undiluted success, according to Mr. Cowan's recollection. The road from Los Angeles to Arcadia was by no means the smooth boulevard of today; it was a dusty, rutted country road. The center of gravity of the wagons was something like 10 feet above the ground, and the ride over the rough road was not one that a nervous person would enjoy. Moreover Mr. Cowan soon discovered the path of the automobile dealer was not all roses. The electrics were continually getting stuck from various causes, and the Cowan service department of that day had a lovely time trying to keep them in even intermittent motion. It is probable that Mr. Hall's passengers frequently got more than their money's worth if the value of their ride be judged by time occupied rather than by distance covered. And one of the bright young mechanics who used to go out to try and solve the mysteries of why the things wouldn't go was one H. D. Ryus, then recently returned from participation in the Spanish-American war, and who now is busily engaged with one Jack Pershing, somewhere in France. In 1901 Ryus was appointed as receiver to take charge of Hall's affairs, and soon after got the White agency.

Mr. Cowan dealt in electrics solely up to the spring of 1902. In the three years that had intervened the progress of the automobile had been slow, literally and figuratively. The steam Locomobile had made some headway in Los Angeles, and was handled first by Frank Olds, and Elmer Boescke, the latter now prominent in Santa Barbara. They had a place of business on First street near Broadway, just below the Central station. One of their first customers was Harry Turner, now a member of the Turner-Whitford Co.

Mr. Cowan has good cause to remember his entrance into the gasoline car business. In February, 1902, he



W. K. COWAN IN THE FIRST WAVERLEY ELECTRIC RUNABOUT SOLD IN LOS ANGELES—1899. S. G. HALL WAS THE BUYER.

bought a shipment of five single-cylinder Rambler cars. It was December when he sold the last one, but his year of effort was the foundation of 14 years of steady handling of the Rambler line. An idea of how the upward curve of the automobile business slanted in the first few years may be gained from the fact that from the five sales of the first year, Cowan jumped to 30 sales the next year, 85 the next, and 125 the next. He handled all the sales himself up to 1904, when he secured as a salesman, H. E. Gilley, who is connected with the Walter M. Brown Co.



COWAN IN HIS CAR IN FRONT OF THE FIRST GARAGE IN LOS ANGELES, BUILT IN 1903 AT 830-32 S. BROADWAY, NEXT-DOOR TO WOODLEY'S.

Mr. Cowan was an active participant in the first automobile races held in Los Angeles some time in 1900. Barney Oldfield was touring the country, driving exhibitions with his Winton Bullet, because he could not find any opponent worthy of his steel. He showed Los Angeles its first speed thrills when he rounded the flat dusty dirt track at Agricultural Park at a mile-a-minute speed. There was a race of steam cars, which turned the track in about one minute and 30 seconds, and a desperate speed duel between Mr. Cowan and his first customer, Steve Hall, in electrics. Mr. Hall won in something over three minutes, an average of almost 20 miles an hour.

In 1903 one Leon T. Shettler launched himself into the automobile business in Los Angeles, selling the curved-dash Oldsmobile. Shettler and John F. McLain, now Franklin dealer in San Francisco, were partners under the name of The Pioneer Motor Co., with headquarters at 420-22 South Hill St. It did not take long for the general public to become aware of the fact that Shettler was engaged in business either. He had no half-way convictions about whatever make of car he happened to represent, and it was a dull week indeed in those days that did not see Shettler emit a fiery challenge to some other dealer for a test of some sort, whether it was speed, economy or endurance, or all three.

The files of the Los Angeles newspapers of 1903-04 and '05 make strange reading today for the man in touch with current automobile affairs. It looks strange, for example, to read an ad above the signature of Earle C. Anthony, proclaiming in lilting measures, "The Cadillac will bring you back," and announcing in tones of heartfelt conviction that the "Cadillac is the best car in the world at any-

where near \$1000." The Lee Motor Car Co., with D. M. Lee as manager, was doing its best to boost the sales of the Buick in the summer of 1905. The fact that the wonderful 4-cylinder Packard Voiture Legere has arrived in the city and may be inspected at a nameless show-room on South Main street is chronicled. Shettler proclaims in no uncertain voice the fact that "of the 1500 machines owned in Los Angeles and Pasadena, 40 per cent are Oldsmobiles."

One thing, however, the years have changed not. The irrepressible William Hickman Pickens knew the value of publicity just as well in 1904 as he does today. Hence we find columns of sage advice from Barney Oldfield to the automobile owners concerning the proper care of his machine, and containing this piece of wisdom, "I have always contended that there is more real sport in driving an automobile than a horse," a statement liable to provoke bitter argument in those times.

The issue of August 20, 1905, contains a modest announcement that Bush & Burge, at the corner of 7th and Main, have taken the agency for the Pierce-Great-Arrow, and will be glad to explain why the Pierce won the Glidden tour and anything else that they really care to go after.

In the spring of 1905 the Los Angeles Motor Car Dealers' Association was formed with W. K. Cowan, in deference to his seniority, as the president, Capt. Ryus as vice-president, and Earle C. Anthony as secretary.

As the first event to be held under the auspices of the newly-formed association, a great endurance run to Santa Barbara was planned and held in August, 1905. It was 110 miles to Santa Barbara in those days, over the steep Casitas Pass, and over roads that did not boast a foot of paving for the entire distance. "Any machine that makes



COWAN WASN'T AFRAID TO GO AWAY FROM HOME IN THOSE EARLY DAYS, 1903. HERE HE IS IN A RAMBLER AT ELSINORE WITH A PARTY OF FRIENDS.

it in eight hours is an established success," wrote the automobile editor of the Times prior to the run.

Sixty machines were entered in the great endurance contest. They left Los Angeles soon after six in the morning, with a noon control established at Ventura, and straggled into Santa Barbara at various times in the afternoon and evening. Then the committee on awards began its work, and after a bitter four-hour session in the

Hotel Potter emerged with the announcement that there had been four cars out of the sixty to emerge with perfect scores, a Rambler, driven by Cowan, a Reo by Shettler, a Winton by D. F. Robinson, and a Cleveland.

The four winners drew lots for the big silver cup that had been put up by the Los Angeles Examiner, and Cowan was the lucky man on the draw. But when Cowan later attempted to show in his advertising that the Rambler had shown the greatest economy of the four victors, it provoked a flaming challenge from Shettler to do the thing all over again.

Cowan was game, and a return contest was staged for the Reo and Rambler only, but it turned out a tie likewise. Speed, economy and reliability were the factors upon which the cars were to be judged. Cowan had to replace a defective spark plug and lost some three or four minutes, so Shettler won as far as reliability went, but the Rambler was the victor on the economy end by two or three pints of gasoline. Both were content to rest on their honors, and Cowan still possesses the big silver cup.

That the automobile run of that day to Santa Barbara was rather different from the journey of today may be gathered from the following quotation from the unfortunate reporter from the Los Angeles Times who was sent along to cover the event.

"The endurance run will never be touted very strongly as a new form of rest cure. It is altogether too much like work. Wrestling with refractory tires, wrenching away at tight spark plugs, scratching the road with one's shoulder blades while screwing up nuts underneath the body or tightening up the clutch, while incidentals, are not the things that make motoring more pleasant."

He further recorded that Harris Hanshue, who had been unfortunate in the trip up to Santa Barbara, returned to

the relying on services of a crew of expert mechanics.

"When I think back over the conditions of the roads we had to motor over in the early days of the industry, I sometimes marvel that we sold any cars at all," said Mr. Cowan. "The roads were just unending dust, sand or chuck-holes, varied in the winter season by large quantities of sticky mud."

"Our progress in road building is fully as astounding as the progress in the development of the automobile itself. It is hard to realize that only 10 years ago Los Angeles



IN 1908 CARS WERE MORE MODERN-LOOKING, AS MAY BE GATHERED FROM THIS SNAP-SHOT OF COWAN AND THOS. B. JEFFERY EN ROUTE TO SAN DIEGO.



THE YEAR 1904 WITNESSED THE FIRST LOS ANGELES-SAN FRANCISCO TRIP. COWAN WAS IN IT IN A RAMBLER; SO WAS ANOTHER RAMBLERFUL OF FRIENDS.

Los Angeles in 5 hours and 15 minutes in his Baby Reo. Shettler came back sedately in 6 hours and 29 minutes, and reported seeing various automobile parts scattered along the road all the way.

According to Mr. Cowan, the chief difficulty in selling the cars in the pioneer days was in convincing a doubting public that the things would actually run, and would really take them, say, to San Bernardino and back without

county had only something like 2 miles of paved road. Through the efforts of property owners, and with contributions from the automobile men, Huntington drive was paved as far as Oneonta Park. That was our 'boulevard system,' and it was not until the year following that the big \$3,500,000 bond issue for good roads was passed, that was the nucleus round which our great county and state system has developed."

Though the truck business was slower to develop, the possibilities of the motor vehicle as a freight hauler were early recognized by progressive business men. Probably the advertising value of the truck had a good deal to do with the first sales, but at any rate Mr. Cowan in 1903 sold an electric truck of his own design to a firm of liquor dealers in San Bernardino.

By 1905 quite a number of representative Los Angeles firms were using trucks. The Berlin Dye Works had pioneered the way with a fleet of clumsy electrics. H. Jevne Co. soon followed with a fleet of Knox delivery cars, and Ville de Paris used several Tourist cars adapted to delivery work. Even with the handicap of uncertain service which the motor vehicles of those days labored under, they displayed such points of superiority over horse-drawn vehicles that even then Jevne declared himself a complete convert to the new method of transportation.

One of the things it is hard for us to comprehend in looking backward is why it was necessary for the early automobiles to be so unbelievably homely. As late as 1904 we read that "E. L. Doheney has just purchased a Peerless car for \$4750. This is one of the finest cars ever

(Continued on Page 16.)

Los Angeles Sets Styles in Car Bodies and Tops

Several Local Factories' Designs Are Copied
by Eastern Makers, Both as to
Cut and Color

HOW rapidly Los Angeles is becoming the center of the automobile top and body industry on the Pacific Coast is emphasized, as never before, by the present annual motor car show in the Southern California metropolis. The fact that all seasons are favorable to automobile travel in Southern California indicates that an industry of this character will thrive all year. In preparing for the annual automobile show the facilities of Los Angeles' top and body establishments are put to the real tests in the effort to turn out creations not only equal to but in numerous instances superior to those produced by Eastern manufacturers.

The success of automobile body and top building and kindred industries upon the Pacific Coast is probably based to a large extent upon the easily understood advantages of propinquity. Their customers enjoy the satisfaction of being able to closely oversee the work being done for them and of knowing that the completed product will bear the imprint of their own personal ideas and whims even to the smallest and most unimportant details. The large manufacturer of automobiles, some two or three thousand miles from his Pacific Coast customers, cannot personally meet them and be guided by their ideas as to how the completed product should look. All his energies are absorbed in the turning out of thousands of cars every year, of two or three different styles. His own success is based largely upon standardization. Also, not



CHANSLOR & LYON JOBS ARE FAMOUS ALL OVER THE COUNTRY FOR THEIR STYLISH LINES.

infrequently, the specifications given by the customer calls for all possible dispatch, and while the large manufacturer is better equipped to give satisfaction here his advantage is largely nullified by the time consumed in freight shipment to distant customers. This advantage of local houses is exemplified in the present automobile show, when many car dealers gave orders for remodeled cars, to be executed in rush time.

Another detail of advantage which necessarily arises is that of prices, which naturally involve the cost of material shipments from the East, because the Pacific Coast houses rely on the Eastern establishments for the greater part of their raw, and a part of their finished material. It is generally claimed that it is cheaper to construct the bodies and tops on the Coast with Eastern materials than to pay the freight on the completely assembled product shipped to the Coast. Freight rates are lower on raw materials shipped in bulk and, contrasted with assembled cars, bodies or tops run much less peril of damage arising from careless packing and crating. In case of damage to assembled car shipments, the local establishments profit in any event, as the branch and dealer agencies on the Coast must turn them over to local industries for rehabilitation.

Coming to the detail of originality, it is here that the advantages enjoyed by Los Angeles becomes manifest. With climatic conditions which are a consummation of those enjoyed by the Pacific Coast in general, automobile travel is pleasant throughout the four seasons. The color of the semi-tropical country infects everything, and not the least obvious is its influence upon the host of automobile owners in Southern California. The southern city has a large proportion of wealthy people, who have either become permanent residents or who come from the East in great numbers every winter. That this class of people are owners of a great number of expensive cars is well known. They are easily able to incorporate their own ideas into their cars, and the renown of the local body



TWO SPECIMENS OF EARL DESIGN WHICH ARE ATTRACTIVE TO SEEKERS AFTER STYLE AND COMFORT.



RAY McNAMARA IN NON-MOTOR-STOP MAXWELL.

Maxwell in 802-Mile Non-Motor-Stop Run

Piloting a Maxwell 1918 five-passenger stock touring car, Ray F. McNamara, road engineer, recently drove 802 miles in a non-motor stop run from Detroit to Indianapolis, Chicago and Detroit in 23 hours and 9 minutes, elapsed running time.

McNamara believed he could make the run inside 24 hours, and though rain and mud were encountered for the better part of 15 hours, he brought the Maxwell through with almost an hour to spare. Allowing for necessary stops and the time the car was in control in cities, the running time actually was 20 hours and 47 minutes.

Leaving Detroit at 1:06 a.m., McNamara was checked in at Indianapolis at 8:15 a. m. for an average of 42.89 miles per hour over the 305 miles. The car started again at 8:45 a. m. and checked into Chicago at 1:50 p. m., 202 miles for an average of 41.79 miles per hour. McNamara got under way again at 2:50 p. m. and checked in at the finish with an average of 31.33 miles per hour from Chicago, 295 miles. This time is considered remarkable in view of the fact most of the distance was traversed at night through rain and mud and over water-covered roads. The average for 802 miles for actual running time was 38.63 miles per hour. For the total time the average was 34.54 miles per hour and 9 minutes.

Ascot Race to Open Fast Season

Ascot Speedway, Los Angeles, will see the competition of some of the fastest drivers of American speedways this season, according to the recent announcement of the speedway management. The Thanksgiving Day races on the Ascot course will be the opening event. The program will take in a 50-mile Liberty sweepstakes, a 20-mile handicap race and a 20-mile invitation race. The prizes will be in the form of Liberty bonds exclusively, to the value of \$5,000.

Barney Oldfield has returned to Southern California with his famous "Golden Egg" car, with which he campaigned a number of Eastern speedways this year. Indications are that he will be a prominent feature at Ascot. Eddie Hearne and Tom Milton will be on the ground soon and others named in the list of possibilities are Ira Vail, Ralph Mulford, Clifford Durant, Joe Thomas and A. H.

Patterson. The work of resurfacing the Ascot track has already been started.

Louis Chevrolet, world's speedway champion for 1918, arrived recently in Los Angeles with two of his fastest Frontenac cars and is preparing for the Thanksgiving Day race at Ascot.

Chalmers Breaks Record from Galveston to Dallas

The Chalmers again demonstrated its ability to stick to the road and endure rough driving at high speed, when Joe Dawson in a four-passenger car drove from Galveston to Dallas—349 miles—in 8 hours and 30 minutes at an average speed of 41½ miles an hour. Dawson was checked out of Galveston by John R. Herr, vice-president of the Galveston Motor Club, at 6 o'clock a. m. of November 1st, and was checked in at the Court House of Dallas, by Oswin K. King, automobile editor of the Dallas Evening Journal, and J. C. Welch, advertising manager, of the Dallas Morning News. The road traversed was much rougher than that covered the previous week, when Dawson covered the Antonio-Dallas record—305 miles—in 6 hours 55 minutes and 40 seconds. In neither of these runs did Dawson stop to make a mechanical adjustment, and the United States Royal Cords, with which his car was equipped, went through without a semblance to trouble.

Uniontown Closes Eastern Racing Season

Eddie Hearne won the 169-mile race on the Uniontown Speedway, Oct. 29, which practically closes the automobile racing season in the East. The winner's time was 1 hour, 49 minutes, 2 seconds, averaging 93.75 miles per hour. Tom Milton finished 25 seconds after Hearne. Earl Devore relieved Ira Vail at the wheel and finished third and Dave Lewis and Dan Hickey came in fourth and fifth respectively. Ralph Mulford, Milton and Gaston Chevrolet led the field at the start, but were led by Vail at the sixteenth lap. Milton passed Devore, who had relieved Vail on account of the latter's illness, in the forty-eighth lap and stayed in the lead for thirty laps, after which he was displaced by Henderson. Finally Hearne gained first place in the 146th lap. The attendance was estimated at 5,000.

Short Items of Racing News

The record from San Antonio, Tex., to Dallas, Tex., was broken recently by a Chalmers four-passenger car driven by Joe Dawson, of the Chalmers engineering staff. The distance is over 305 miles and Dawson covered it in 6 hours 55 minutes, 40 seconds, making an average of 43 miles per hour. The time of the Texas Special train between these two points is 7 hours, 55 minutes.

Ralph De Palma made a new world's record for 10 miles when he drove his aviation-engined Packard on the Sheepshead Bay speedway track, near New York in a time of 5 minutes, 17 seconds. The former record was set by Kormstedt and was 5 minutes, 19 seconds.

Caleb Bragg, millionaire race driver and airplanist, has now gained fame in the latter field by breaking altitude records with an ascent to 22,000 feet, or more than four miles, accomplished within one hour. His record was made at the Minneola field.

Motor West

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Lighting Law for Horse-Drawn Vehicles not Observed

NUMEROUS complaints have reached the office of "Motor West" that that portion of the new California lighting law governing the operation of horse-drawn vehicles at night is not generally observed.

With darkness descending just at the time when business men are returning, in their cars to their homes, and when drivers of motor trucks are seeking their garages, the possibilities of accident, where the slow-moving horse-drawn wagon is not provided with a light, are manifold.

Out in the suburbs, especially where overhanging trees throw the road into Stygian darkness, and where the reasonable speed of a motor car is considerably greater than in the better-lighted city streets, it is not uncommon for the automobile driver to meet a lightless horse-drawn rig, traveling in the same direction and occupying its full half of the roadway. Frequently it requires a quick swerve to avoid the wagon, and should the road be slippery for any reason, there is likely to be an accident anyhow.

The new rule requiring the beam of light from the head lamps to be not higher than 42 inches at a point 75 feet in front of the car has been met, in many instances, by the motorist having the lamp brackets bent down, thus limiting the illuminated area in front of the speeding car. As a result the lightless wagon ahead does not come within the field of illumination until the motor car is almost upon it. In the fogs which prevail at nights on the Pacific Coast during the winter months a lightless wagon hugging the side of the road is a decided menace. Under such conditions the driver of an automobile also seeks the side of the road in order that he may keep his bearings, the head lamps showing the line of demarcation between the grass and the concrete.

If there is anything in these numerous complaints about lightless wagons, it behooves the police of the cities and towns throughout California to be as strict with the drivers as they would be, and are, with the drivers of motor cars

under similar circumstances. More so, in fact, for the driver of a horse-drawn vehicle pays no annual license tax, but is given free use of the roads which are paid for, and maintained, largely by automobile owners.

A few arrests would have a tendency to bring the offending wagon drivers into line. In justice to the automobilists they should be so disciplined.

Leniency on the Bench Expensive to Motorists

IT IS reported that some of the companies which write automobile insurance are going to refuse to continue this line of business, and that within the next month they will take drastic action in this direction. There is also a report going the rounds that theft insurance will be written for only 50 per cent of the value of the car.

In the western cattle country the cattlemen who have suffered from "rustlers" have organized, and employed detectives to trace down the rustlers and to bring about their conviction in court. When detectives in one district have become well known they are sent to other districts. In this way they are able to fool the rustlers and cattle thievery is decreasing steadily. It used to be a regular business, as is the case now in the automobile field.

The suggestion has been made that the great automobile clubs of this country enter into the apprehension of motor car thieves on the same plan as is employed by the cattlemen. There can be no doubt that were real efforts undertaken to put a stop to organized thievery in the automobile field there would be an immediate decrease in the number of thefts. In many of the largest cities of America, including New York, Chicago, Detroit and Los Angeles, there have been caught men belonging to organized bands of motor car thieves whose work it has been to steal the cars and after removing all identification marks, sell them. These men have been properly punished. It now remains to give the individual car thief the same medicine. The lenient judge is costing the motorist excessive insurance premiums, and unless he inflicts penalties that fit the crime, the car owner who seeks to insure his car will be mulcted in even greater amounts.

Not an Argument Against Prohibition, However

JUST as we motorists had begun to congratulate ourselves that a way had at last been discovered for increasing the good roads mileage of the various states by using convicts to build them, comes word from Colorado that, owing to the passage of the dry law in that state, the prisons are becoming tenantless.

Warden Tynan, of Colorado's State Penitentiary, says that since January 1, 1916, when the dry law went into effect in his state, there are 229 fewer prisoners under his care, and that arrivals are becoming scarcer every day. Already one of the cell-houses has been closed, due to lack of occupants.

This is a pretty how-de-do. But just because of it "Motor West" is not going to advocate a return to the wide-open system. Not at all. We opine that now that the beauty and utility of good roads have been demonstrated, the states, the counties and the townships will find means to secure the necessary money for road improvement by direct methods, just as California has done and is doing.

Committee to Co-Ordinate Government's Needs With Industry

Following the issuance of an order by Judge Robert S. Lovett, as chairman of the Priorities Board, a section of the War Industries Board, that certain steels should be reserved for the use of the Government, thus depriving automobile manufacturers of their needs, the Board asked the representative organizations in the automobile industry to hold a meeting with a view to presenting the industry's side of the case.

Preliminary meetings at Washington were attended by the directors of the N. A. C. C., the Motor and Accessory Manufacturers and representatives of the Ford Motor Co., and later the makers of automobiles, parts and accessories, presented their side of the whole matter to the War Industries Board.

President Clifton of the N. A. C. C. and Howard E. Coffin, presented the case for the industry. As a result of that conference, the War Industries Board decided to put the matter in the hands of the automobile interests. The Board desires motor car makers to produce war munitions.

The industry was asked to arrange for a permanent committee with headquarters at Washington, to formulate a plan for the proportion of work to be done for the Government and for private purposes; thus officially recognizing the industry.

The makers have assured the War Industries Board of their readiness to divert part of their plants to the production of military materials and it will be the work of this committee to arrange this in such a way as to preserve the standing of motor car makers, the position of their sales organizations and their thousands of employees.

The War Industries Board felt that this whole matter could be left to the industry to work out, and it is believed a plan can be prepared to broadly handle the automobile situation, and enable the Government without drastic curtailment of car production to secure from many of these plants, munitions urgently needed by various departments.

Car Production Greater Than Ever After War

At the conclusion of the war, automobile production in America will be larger than ever, according to the official communication of the Society of Automotive Engineers, which says that domestic and foreign demands will have to be satisfied. Europe will want large quantities of high-priced machines. The American manufacturers who have by the most intensive specialization developed the modern automobile of low cost will naturally be in an advantageous position in the world-wide trade, although competition will be keener than ever before.

Prejudice Against Yellowish Gasoline Unwarranted

The unwarranted prejudice of the average motorist against yellowish gasoline has recently been remarked on by the trade and technical section of the public information division of the United States Food Administration. In the early days of the oil industry poor refining methods were responsible for the production of yellowish kerosenes and gasolines, which were sometimes dangerous. This led the public to demand that gasoline be "water white" and the prejudice has hindered cracking processes which produce perfectly safe gasoline with a slight yellow tinge.

Another handicap in the industry is the necessity for refiners treating gasoline with sulphuric acid and caustic soda to remove unsaturated hydrocarbons which have high fuel value in explosive engines. It is estimated that there is a loss of \$10,000,000 a year in the United States through these prejudices, represented by 30,000,000 gallons of gasoline, 35,000 tons of sulphuric acid and 3,500 tons of caustic soda.

Exports of Mineral Oils Show Big Increases

More mineral oils were exported from the United States during the fiscal year 1917 than ever before, the total amounting to 2,749,438,434 gallons valued at \$230,953,149, according to figures made public by the Bureau of Foreign and Domestic Commerce, of the Department of Commerce. This was an increase of approximately 300,000,000 gallons and \$65,000,000 over 1916 and about 470,000,000 gallons and \$79,000,000 over 1914, the last normal year before the war. Only a small percentage of the total exported was crude oil.

The war has had the effect of reducing the exports of illuminating oil, the foreign sales for 1917 totalling 835,114,403 gallons valued at \$54,662,094 against 1,157,283,310 gallons valued at \$74,500,162 in 1914. Exports of gas and fuel oil, however, have more than doubled in quantity and value in the last three years, increasing from 475,143,205 gallons valued at \$13,747,863 in 1914 to 1,040,671,713 gallons valued at \$32,473,872 in 1917. The exports of gasoline and lubricating oils have, also increased substantially, as indicated in the following table:

EXPORTS.	1917.		1914.	
	Gallons.	Value.	Gallons.	Value.
Crude Oil	176,368,675	\$ 7,162,550	146,477,342	\$ 6,812,673
Gas and fuel oil	1,040,671,713	32,473,872	475,143,205	13,747,863
Illuminating oil	835,114,403	54,662,094	1,157,283,310	74,500,162
Lubricating oil	271,028,546	48,648,557	196,884,696	27,852,959
Gasoline	226,185,730	46,936,510	151,611,537	21,699,475
Naphtha	199,517,400	41,034,753	40,840,780	5,653,210
Residuum	551,967	33,813	113,370,245	1,907,715
Total Exports	2,749,438,434	\$230,953,149	2,281,611,065	\$152,174,056
Shipments to non-contiguous territory	109,570,267	5,937,214	101,972,887	3,635,172
Total Shipments and Exports	2,859,008,701	\$236,890,363	2,383,583,952	\$155,809,228
IMPORTS.				
Crude	1,034,590,849	14,109,035	773,052,480	11,776,787
Benzine, gaso-line, etc.	10,804,864	1,402,275	16,139,912	1,400,740
All other	33,425,222	2,328,666	1,945,007	488,468
Total Imports	1,078,820,935	\$17,839,976	791,137,399	\$13,665,940
Re-exports	1,693,807	61,275	10,871	1,563
Net Imports	1,077,127,128	\$17,778,701	791,126,528	\$13,664,377



November 12-17—Annual Show Los Angeles Motor Car Dealers' Association, Harris M. Hanshue, secretary.
 November 12-18—Denver, Colo., Annual Show, Auto Trades Association, G. A. Wahlgreen, manager.
 January 5-12, 1918—New York National Show.
 January 21-26—Portland, Ore., Show.
 January 26-February 2—Chicago National Show.
 February 9-16—Kansas City, Mo., Show.
 February 11-16—St. Louis, Mo., Show.
 February 16-26—Annual San Francisco Show, Geo. A. Wahlgreen, manager.
 February 18-23—Des Moines, Iowa, Show.
 February 23-March 2—Omaha, Neb., Show.
 March 2-9—Boston Show.
 March 19-24—San Francisco Motor Truck Show.
 April 9-13—Stockton, Cal., Show.



How to Make the Trailer Pay

Comparisons Show That in Combination With Motor Truck it is Economical, With or Without Helper

THE STRONGEST arguments in favor of the adoption of the trailer as an auxiliary to the truck, says the official organ of the Motor Truck Club, are: First, increased carrying capacity; second, reduced hauling costs. Economy and efficiency in truck-trailer operation are insured if due consideration be given the character of the material to be hauled and its relation to the trailer equipment, loading and unloading methods, etc. This statement is based upon the presumption that a preliminary study of the local hauling conditions has shown that the roads are hard-surfaced and that the maximum grades do not exceed 10 per cent.

On long hauls, the lowest hauling costs are obtained where the tonnage moved per trip is greatest. In such cases, the additional hauling capacity afforded by the use of trailers assumes prime importance. If the truck hauls 3 tons working alone, when with the trailer equipment it might just as well haul six or more tons at a very slight

additional operating expense, the value of the trailer is apparent.

On long hauls the question of speed is an important factor. The trailer must be built to run just as fast as the truck can pull it. A slow-speed trailer, by limiting the speed of the truck, nullifies the advantage to be gained by carrying the double load. If, however, it is impossible to operate the truck at its normal speed in districts where the traffic is congested, the use of the trailer will offset the loss occasioned by the reduced speed.

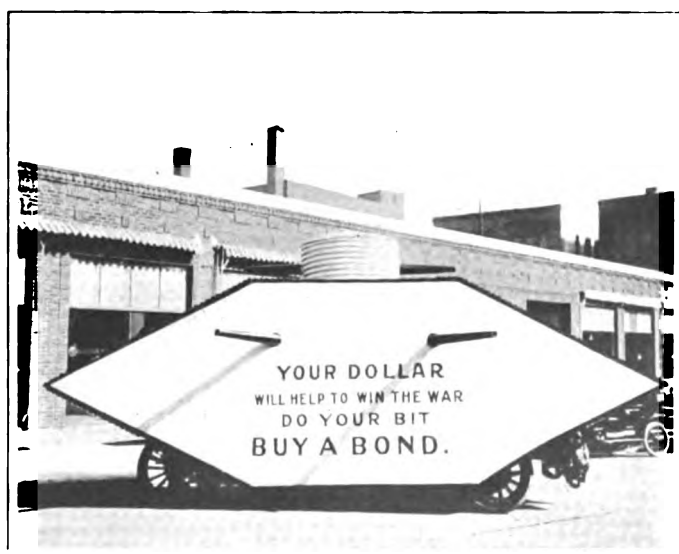
Where the hauls are short the item of lost time, i.e., the time spent in loading and unloading the truck, assumes first importance. It is imperative, therefore, that this lost time be reduced to the minimum. The truck, to be a profitable investment, must be kept moving. It is too costly an article to be used as a loading platform, and should be kept under pay load as much of the time as possible. This may be accomplished by the use of one or more trailers. Extra trailers may quickly be put in or taken out of service, and when not in use represent a much smaller investment than the same carrying capacity in motor trucks.

If but one trailer is used it can be loaded while the truck is making the trip alone, and be picked up by the truck on every other trip. Two trailers can be used to still better advantage, while a fleet of three trailers makes a very efficient hauling unit, especially where loading and unloading take up a large part of the truck's time. In the latter case it may be found good practice to use the truck only as a tractor and keep it in motion almost continually. One trailer may be kept at each end of the haul, while the truck is in transit with the third trailer.

A conservative estimate of the operating cost for a 5-ton truck is \$16 a day. Every minute this truck is not in motion it costs 22-3 cents—every hour \$1.60. The truck not only makes no money while standing still—it loses money. It makes money only while in motion. If it can be kept moving 10 hours a day, so much the better—the profits will be correspondingly greater.

If the trailer costs \$4 a day to operate, or 2-3 cent a minute, or 40 cents an hour, for every hour it is used in place of the truck it saves the difference between \$1.60 and 40 cents. Moreover, to this amount must be added the profit the truck makes when it is kept under pay load. When the truck is running it not only makes the \$1.60 an hour operating cost, but a profit besides. When it is standing still it loses the \$1.60 an hour operating cost plus the profit it might have made by being under load.

On short hauls the reversible feature of a trailer is a great saver of time and labor. With a reversible model it is not necessary to turn the trailer around, as the truck may be attached to either end, and the trailer can be backed easily into any position desired. It is not necessary to laboriously detach the draw-bar from one end of



REPUBLIC MOTOR "TANK" IN LIBERTY LOAN DRIVE.

This is a float built on a Republic 1½-ton chassis by the Jaquith Motor Co. of Sioux Falls, S. D. It was a feature that was applauded all along the line of the great patriotic parade when Secretary McAdoo went to Sioux Falls to deliver the first speech in the Northwest on the second Liberty Loan drive. During the parade blank cartridges were fired by the six guns mounted in the float. The advertising of the Republic Motor Truck Co. is inspiring many dealers to unusual co-operation this year. The advertising campaign of the factory totals over \$1000 every working day.

the trailer and fasten it to the other, as both ends are alike. The only time lost in reversing the trailer is the time it takes the truck to turn itself and back into position to receive the coupling link.

The item of reversibility saves more time than might be imagined. For example, if it takes 6 minutes to reverse an ordinary trailer which makes four trips a day, it must be turned around or reversed at the end of every trip, or eight times during the day, with a total elapsed time for the day of 48-minutes. This is time lost in more ways than one, as the running time of the truck is reduced and the working time of the labor is curtailed. The helpers must stand around until the turning or reversing operation has been completed.

OPERATING EXPENSE OF TRAILER.

	Per Day
First cost of trailer, equipped with 7-in. rubber tires, \$1,540. (Life, 5 years, working 300 days a year, 1500 days).....	\$1.03
Tire cost, based on price to consumer (from list), \$341.52. Mileage guarantee, 7000. Assuming trailer will run an average of 40 miles per day.....	1.95
Repairs at \$50 per year (estimated).....	.17
Insurance—fire, liability and property.....	.16
Interest, 6 per cent yearly on \$1,540.....	.31
License fee, \$15 yearly.....	.05
Increase of gasoline consumption and tire wear on truck, estimated at 10 per cent.....	.37
Total operating expense of trailer.....	\$4.04

For the purpose of comparison, the life of the trailer has been set at 5 years. As a matter of fact, under average conditions, it will last indefinitely, as it is not subjected to such severe strains as the truck must undergo.

Many trucks carry a helper, which slightly increases the operating cost of the truck. When the trailer equipment is added, this makes the cost figures still more pronounced in favor of the trailer, as the carrying capacity of the truck is doubled with no additional labor cost.

The following table shows the comparative cost of operating a 5-ton truck with and without trailer, and with and without an extra helper:

	Without trailer	With trailer and no extra helper	With trailer and 1 extra helper at \$2.50 a day
Days per month operated.....	24	24	24
Mileage covered.....	863	863	863
Average mileage per day.....	35.96	35.96	35.96
Cost per day operated.....	\$15.82	\$19.86	\$22.36
Cost per mile.....	0.44	0.55	0.62
Cost per ton mile, cents.....	8.7	5.5	6.2

Oakland, Cal.—John Mullin and T. W. Costello have opened a trans-bay branch house for the Power Rubber Co., San Francisco, Racine tire distributors.

Motor Truck as Wire Stringer

Planting Telegraph and Telephone Poles Made Easy — Motor Raises Sticks by Means of Winch and Cable

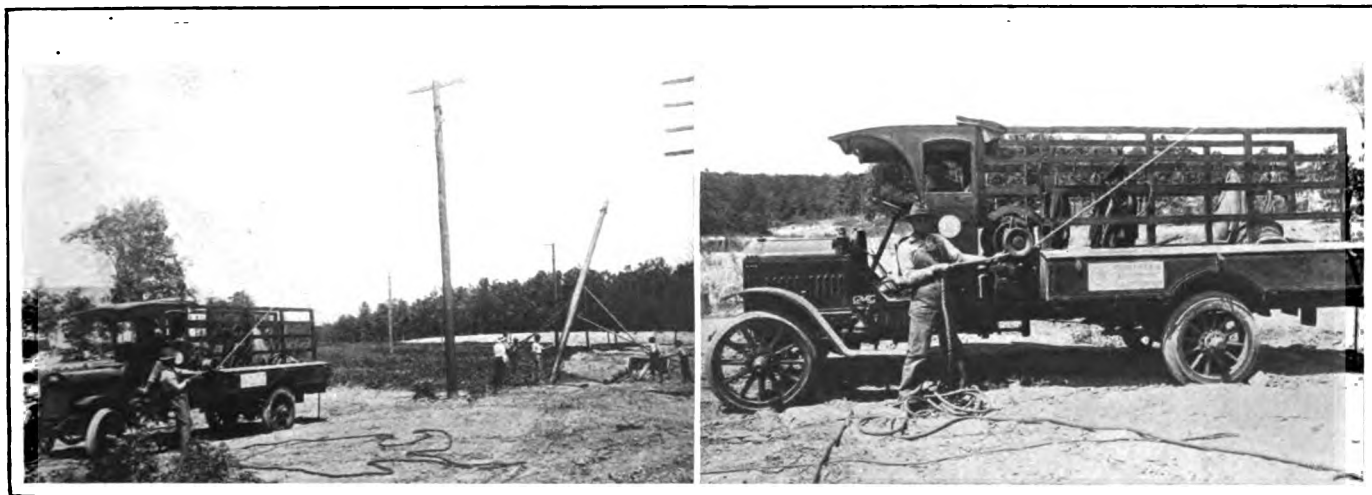
Planting the telephone crop for the country each year is a job that has nothing whatever to do with Mr. Hoover and his associates, but it nevertheless is one of vital importance to the nation. And now that the spans of telephone wires must be multiplied to bear the burden of official as well as private messages, invention has found a new way of getting down the sticks on which the wires are strung—one that is much quicker, less hazardous and less expensive than the old method of raising the pole by hand power.

The Bell Telephone Co. is using the new method successfully these days with the aid of GMC trucks. The company now has a fleet of six of these trucks. They are equipped with a power take-off device which operates a winch on the side of the truck. This is equipment which can be had on GMC trucks when specially ordered and makes it possible for the motor to do other work than drive the truck. By means of the winch, a cable and block, it is possible to raise a telephone pole with a much smaller crew than when the pole was put up by hand. The pulley block is fastened to a pole already up and the cable run through it. One end goes around the top of the new pole and the other is twisted around the drum of the winch. Four men with pike poles handle the lower end of the pole and guide it into the hole as the winch pulls the top up into the air.

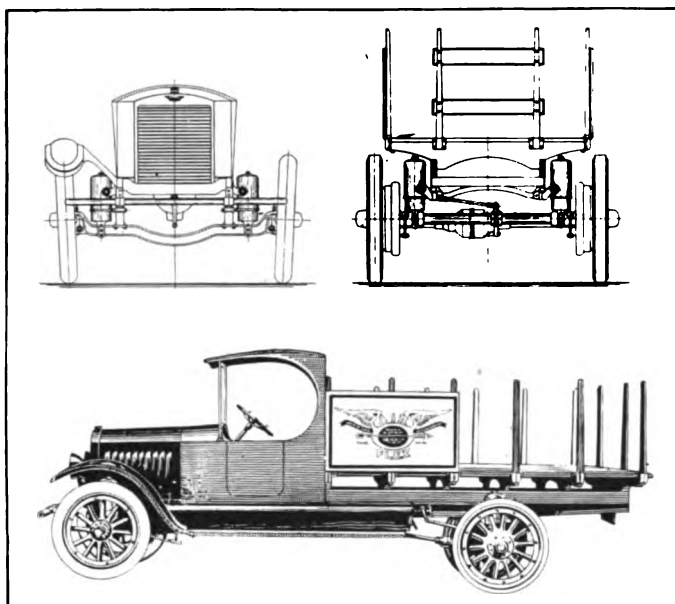
Recently a rush job of line work was done by the telephone company in constructing the lines to the national army cantonment at Camp Gordon. The GMC truck shown in the illustration was used for this work.

To Drive Egg-Laden Air-O-Flex Across Continent

There has been much comment throughout the country over the statement of officials of the Air-O-Flex Automobile Corporation that, when completed, one of their models will be driven from the Atlantic to the Pacific loaded with crated eggs to demonstrate the qualities given to a truck by the Air-O-Flex suspension cylinders, which replace the springs.



PUTTING UP TELEPHONE POLES RAPIDLY WITH THE AID OF A GMC TRUCK EQUIPPED WITH WINCH AND CABLE.



FRONT, REAR AND SIDE ELEVATIONS OF AIR-O-FLEX.

A Springless Motor Truck

Air-O-Flex Engineers Adopt Suspension Cylinders which Act With Equal Resiliency Whether Empty or Loaded

Manufacturers of commercial vehicles have attempted for years to overcome suspension faults and the tendency to overload, while pleasure car manufacturers and owners have tried to remedy rebound vibration and lack of flexibility by the use of all sorts of devices, such as shock absorbers, rebound straps and rubber bumpers.

The Air-O-Flex Automobile Corporation, of Detroit, has entered the field with the Air-O-Flex suspension cylinder. The engineers claim to have found the ideal suspension, one giving a flexibility heretofore thought impossible, and being capable of adjustment to both load and road conditions instantaneously from the dash. It is claimed that trucks fitted with the Air-O-Flex suspension cylinders will travel with equal resiliency whether light or loaded. The suspension cylinders replace the springs, enabling the regulation of the suspension of the truck load to the poundage carried.

Instead of the conventional steel springs, four cylinders are used, one for each wheel, attached to the vehicle in such manner that part of the cylinder moves with the chassis and part with the axle, the chassis and load riding on a resilient cushion or contracting and expanding body of air and oil, the cylinder being governed in the rapidity of its telescopic action by pressure and vacuum working in unison. The action of each cylinder is independent and against pressure in a central tank 30 inches long, 6 inches in diameter, which is one-third filled with ordinary engine oil. Pressure is maintained in the tank with an ordinary air pump attached to the motor, and, by means of a regulating valve, this pressure automatically builds up or cuts down to gain the desired flexibility.

The cylinders are attached to the axle by means of a ball-and-socket joint and to the chassis or frame with a bracket pivotally connected by means of trunnion studs. A full universal action is provided, allowing freedom of

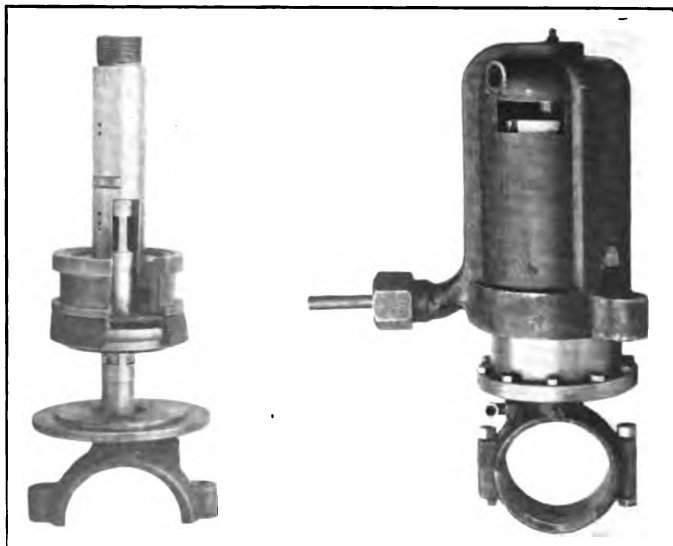
motion in all directions, thus relieving the cylinders of all possible side strain and consequent wear. The driving strains are taken through a pair of staunch radius rods which secure the front axle in its position. The cross or sideways strains are taken by a rear cross radius rod. These radius rods absorb fore and aft strains as well as side-sway strains, but carry none of the load. The cylinders perform the sole duty of flexibly supporting the load and are free from all other strains. The pneumatic suspension patents protecting this feature are controlled by the Air-O-Flex Automobile Corporation, and are the result of more than 14 years spent in research work, invention, experimental work and final reduction to practice.

10,000 Heavy Duty War Trucks by June 1st

All contracts for the new heavy duty war truck were placed by November 1. Axles, motors, transmission and steering gears have already been ordered for the first 10,000 Class B trucks and the remaining contracts will be placed shortly. The trucks are being purchased by the quartermaster department, which works co-operatively with the War Industries Board. The director of the Military Truck Production section arranges with all the makers of each part for a specified date when they shall visit him at headquarters to discuss the form of contract and secure specifications and necessary information. The section in turn hands over all available data to Brig. General Chauncey B. Baker, of the Quartermaster Corps, who places the actual contracts following submission of the bids by the makers. It is expected that the first delivery of trucks will take place in January and that the 10,000 will be completed by the latter part of June. Following the completion of the contract distributions, the Military Truck Production Section will turn its efforts chiefly toward actual truck production.

Melhuish Favors National Motor Truck Show

William F. Melhuish, president and general manager of the Fulton Motor Truck Co., of Farmingdale, L. I., is in favor of one great annual motor truck exhibition. Mr. Melhuish believes that the time is ripe to talk of such an event to be held at some point in the Central West, preferably Detroit, and his company would support such an event he says, as a means to show the great growth of the industry.



SHOWING INTERNAL MECHANISM OF AIR-O-FLEX SUSPENSION, AND THE DEVICE AS ASSEMBLED.

First Motorized Battery Formed

Doubtless there will be many completely motorized batteries before the present war is ended, but the honor of being first goes to Battery "C," 5th F. A. commanded by Capt. W. H. Capron, and formed at Fort Sill, Okla. A battery consists of four guns with their limbers, and six caissons with their limbers, six ammunition trucks, a store truck and a machine shop or repair truck. In the case of guns of smaller calibre a tractor will haul a section of artillery which consists of a caisson and its limber and a gun and its limber. Much shorter poles are used than with horses, the end of the pole being provided with a lunette or eye, making the coupling for the tractor. Each tractor pulls a load of about nine tons. The vehicles used are the six trucks, the Holt 45 h.p. Caterpillar tractor and a Dodge Brothers touring car.

The entire brigade as proposed by the War Department will be composed of three regiments having a maximum strength of 3685 officers and men. It will have 72 guns and 108 caissons. To keep this equipment working will require 108 ammunition trucks, 27 store trucks, 90 tractors, 9 repair trucks, 21 repair cars, 9 passenger trucks, 9 tank trucks and 37 supply trucks, all motor driven. In addition to these vehicles the brigade has 297 motorcycles with side cars and 30 reel carts.

Speeding Up Production of Liberty Motor Truck

There was the utmost secrecy about the building of the first Liberty motor truck for the United States government. The truck is standardized, and enemy governments were allowed to gain not the slightest knowledge regarding it. The first model was built in a structure which was windowless. Skylights admitted light. Guards stood outside for the three weeks' period during which the model was put together.

Two trucks were assembled, one at Lima, O., and the other at Rochester, N. Y., and the same secrecy was maintained about both of them. Duplicate parts were sent to each city, some by registered mail, some by courier, but none by express or other means allowing of their theft. Over 60 factories participated in the manufacturing of the parts from which the first two models were assembled. Army representatives guarded the making of each part and took charge of it until the part reached the proper hands. Factory officials were informed by telegraph in code as to progress being made.

Thirty-five thousand of these trucks are to be built. The design is the product of the combined brains of many of the great leaders of the automobile industry. Reports state that the truck will carry 1,000 pounds dead weight above the capacity of trucks on the market of the same size and power.

Christian Girl, head of the Military Truck production Board, who gave up the presidency of the Standard Parts Co. to work for the Government at \$1 per month, is commandeering production men and purchasing agents of many leading factories, to aid him in bringing about the rapid production of the 35,000 trucks. Delivery of these for shipment to Europe will come at an early date and rapid production is assured, as quite a number of the makers will set aside commercial wagon building for American customers, to hurry the government work. Some reports state that the entire 35,000 machines will be turned out before the close of the first half of the year 1918.



BATTERY "C," FIFTH FIELD ARTILLERY, FIRST TO BE FULLY MOTORIZED.

One Farmer's Experience with a Motor Truck

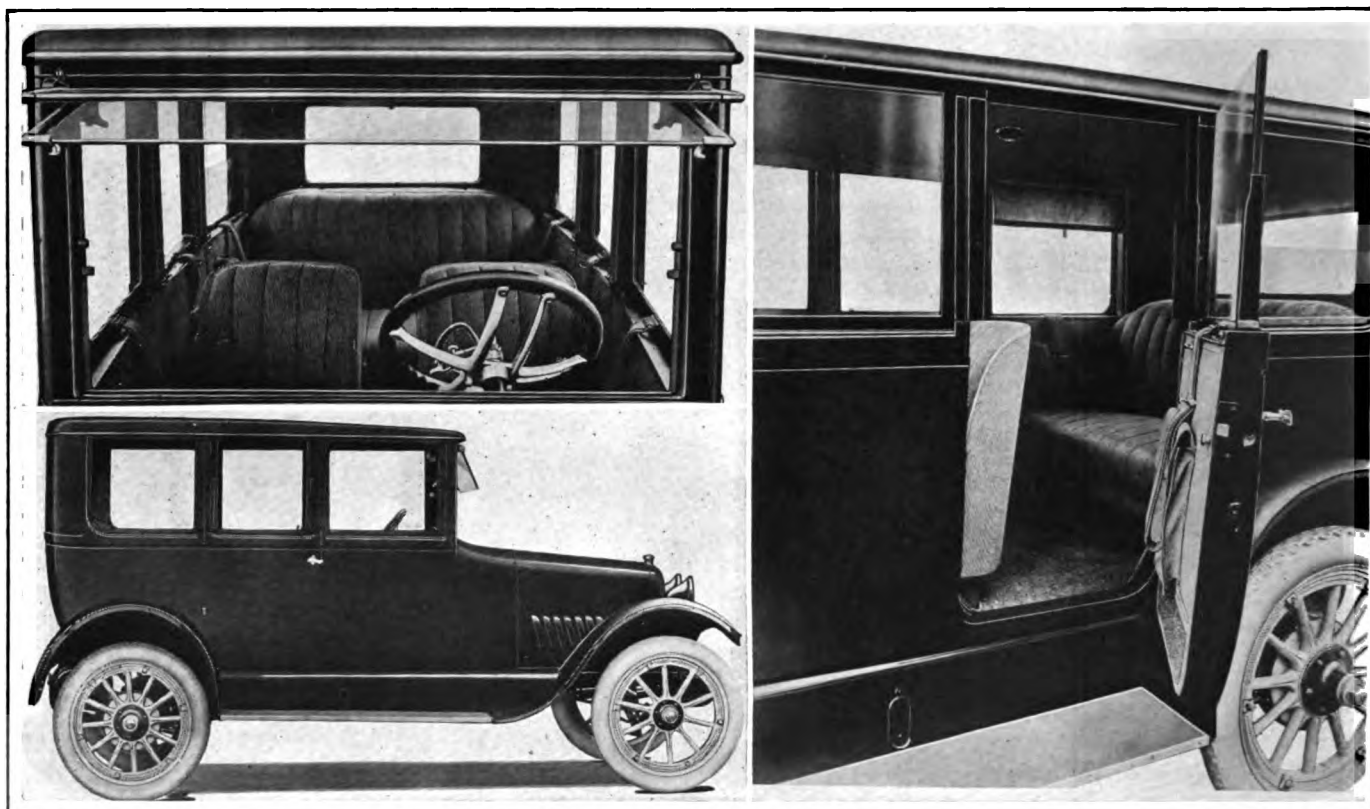
In approaching the problem of making farm work efficient in the highest modern sense, a Pacific Coast agriculturist has reached the conclusion that a great deal of golden time was wasted by the old-fashioned methods of getting products to market.

"One man and a motor truck," he reasoned, "ought to do the work of two or three drivers and teams." He investigated the truck situation thoroughly and invested in a one-ton truck. That it happened to be a Maxwell is only incidental. In speaking of his experience, he says: "I have taken all my farm products to market in that truck. I have hauled 10,000 bushels of shelled corn, for instance, and all the rest of my corn, besides every bushel of wheat, oats, hay, potatoes—in fact, everything grown on my land. I have repeatedly hauled 55 bushels to a load, driven nine miles into town and made seven trips a day, and that, I figure, is just five more trips than I could have made with a team of first-class horses. My truck has more than paid its way."

Huckster Finds Truck an Economical Proposition

Hucksters are fast finding the one-ton Maxwell truck a money-maker for them far beyond their ability when teams and wagons are exclusively used. One instance that serves as an example of what a huckster may accomplish by adopting motor truck transportation is case of Al Keegan, of Phoenix, Ariz. Keegan plies his trade of vegetable vender between Phoenix and Avondale. For years he had used a double team and wagon. Often the Arizona roads were so difficult that it was impossible for a team and wagon to get over them to town with a load. He bought a Maxwell one-ton truck, and now, whether the roads are in good condition or not, Keegan always arrives in Avondale and Phoenix on time with his garden truck. Here is Keegan's opinion: "When you consider that this truck will cover 100 miles in an ordinary working day and that the upkeep is considerable less than that of a team and wagon, it is extremely economical. Especially since one man and a Maxwell truck will do the work of several horses and their drivers."

Puyallup, Wash.—The E. & G. Motor Co., capital \$6,000, has been incorporated by A. C. Ewing and L. F. Galloupe.



ELGIN SIX CONVERTIBLE SEDAN IS A MODEL OF OUTWARD GRACE AND INTERIOR COMFORT AND ELEGANCE.

Elgin Six Convertible Sedan

**New Model Suitable for Summer or Winter—
Comfort and Luxury in Travel
Insured by Equipment**

THE general specifications of the Elgin Six Convertible Sedan, or which is sometimes known as the "all-weather" type car, are identical with those of the five-passenger touring and roadster models, including Timken bearings in the front wheels and 117-inch wheel-base.

The Elgin Six Sedan is fashioned after the latest Springfield type of body, having two doors, one on either side, and constructed so that it may be entirely closed for winter and cold weather driving, or entirely open for summer touring. The interior is thoroughly upholstered with the best grade of Bedford cord up to the belt line, with a lighter weight high-grade material above using a thoroughly good grade of wire springs and upholstering in cushions and backs.

Ample room has been provided for comfortably seating five people. Front seats are of the bucket type with passageway between. The cushions are covered with a rich, high-grade, gray striped, durable whipcord in the Pipe style, without buttons. The back of front seats and instrument board are also covered with same material.

Plate glass is used in doors and windows. Front quarter door and rear quarter windows are set in metal frames. Front quarter and door windows are made to drop and provided with sash lifters. Door windows have metal flappers. The rear quarter windows are stationary type but made to be removable. The rear window is also stationary. Construction of all windows is such as to avoid all rattle. Liberal size pockets are provided in the doors. The door pillars above the belt line operate on hinges so that when windows are down, pillars close over window compartments and have suitable locks to hold

them in place. A compartment behind the rear seat has been provided for storing rear quarter windows.

Plate glass set in metal frame is also used in the windshield, which is of the ventilating type. The upper section has friction type adjustable fixture. The lower section has the jump fixtures. A rubber weather strip is set in metal channel around the windshield and also on the top of glass of the lower section of windshield. The plate glass rain visor is set in metal sash and is of the adjustable type.

The Elgin Six Sedan is regularly equipped with a patented adjustable steering wheel 18 inches in diameter. This wheel can be so adjusted as to bring it out of regular driving position, providing extraordinary room for the driver in getting to and from his seat, a feature which is particularly appreciated by stout drivers.

A highly appreciable extra feature of the equipment of the Sedan is a heater which is furnished regularly. The equipment includes a Stewart speedometer, charging indicator, dash lamp, electric motor-driven horn, extra tire-rim, set of tools, pump and tire repair outfit. The price of the Elgin Six Sedan is \$1645 f.o.b. Chicago.

"Vacation Tour Cheaper than Staying Home"

"You can take a vacation tour for less than it costs to stay at home," is the title to a booklet which several automobile advertising men have asserted to be one of the most striking pieces of literature that so far has come out of the industry. The booklet, written by Parke West for and issued by the Maxwell Motor Sales Corp., bears out in the facts and figures set forth that the modern motor car has attained the described scope of usefulness in this country. The figures cite for the first time on this basis the costs of a double transcontinental vacation tour by automobile, made by Mrs. Miriam Thayer Seeley, of the Oregon Agricultural College, and Mrs. Seeley works out the deduction that such traveling is less expensive than staying at home. Maxwell dealers throughout the country now are distributing the booklet.

Oroville, Cal.—The Thunen Cyclery has taken the Buick and Chevrolet agencies.

NAILING A LIE—COLD!!

We have read letters from Chalmers Distributors in which they have stated that competitors were saying to present owners of Chalmers cars and to prospective buyers, generally, that the manufacture of Chalmers cars would be discontinued.

There are thirty (30) automobile companies recognized by the general trade that manufacture and sell Touring Cars, and Roadsters at retail prices between \$1,100. and \$1,500. We haven't heard that all of these companies or any one of them were going to discontinue production or quit business. Why then should the Chalmers, with a better car than many others in this class of 30 manufacturers, stop production?

WE Make a prophecy, and will authorize our Distributors to back it up with \$200,000. of our money; that, the Chalmers Company under the Maxwell Management, will stand ahead of 15 of these companies in production in 1918, and the Chalmers Company will stand ahead of 20 of these companies in production in 1919. This doesn't look as though we expected to discontinue making Chalmers cars.

The reason some people are trying to disturb the present Chalmers owners is to scare them about service so as to get a better "trade in" on his Chalmers.

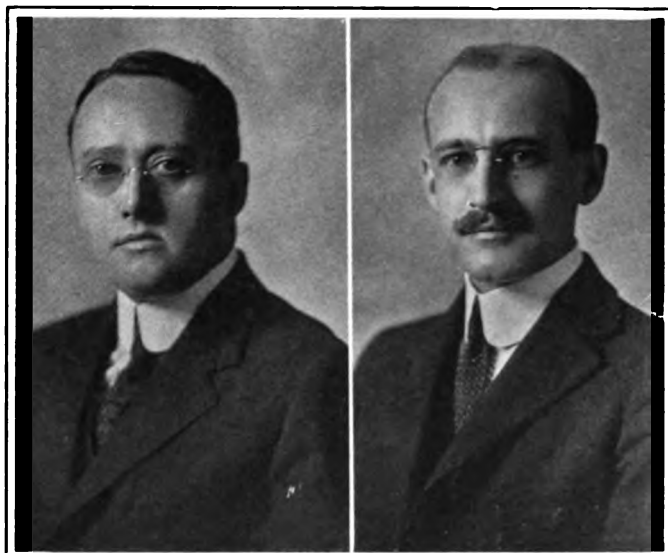
The reason for circulating such a story generally would be to prevent the prospective purchaser from inspecting a Chalmers car, because if a prospective buyer of an automobile will look at and ride in the present Chalmers models he will be very apt to buy one. It is the best car selling at \$1365 that we know of.

This is one reason why Chalmers cars will continue to be made, not only in 1918, but in 1919, 1920 and other years.

Another reason is that the Maxwell organization has told the general public that Chalmers cars would be produced in larger quantities than ever before and we have a way of making good with the public on sales and production.

Walter E. Standen
President, Chalmers & Maxwell Motor Companies.





W. OWEN THOMAS. T. R. THOMAS.
Detroit Engineers Who Helped Canada Solve War Problems.

Detroit Engineers Help Canada Solve War Problems

Two brothers, W. Owen Thomas and T. R. Thomas, consulting automotive engineers in Detroit, are close students of the war game and are closely watching every development while doing all within their power to assist the United States Government in solving its many problems, just as they assisted the Canadian Government during nearly two years and one-half covering the period immediately following the outbreak of the European war and the participation of Canada in this war.

When the motor trucks for the first contingent of the

Canadian army to Europe were purchased, it was difficult with the facilities at hand to buy them direct from the manufacturers. General Sir Sam Hughes sent for the Thomas brothers and gave them commissions. He turned over to them the problem of standardizing and purchasing motor trucks and of training officers and men for transport duty in France. T. R. Thomas remained in Ottawa, while W. Owen Thomas went to the front. General Hughes later gave W. Owen Thomas charge of technical standards and inspection, and appointed him to deal on all technical matters with the War Office and the Ministry of Munitions. General Sir Sam Hughes paid the highest compliment possible to the Detroit engineers afterwards when he said: "Nothing could excel the quality of the team work and organization of our engineering and manufacturing difficulties by these two brothers."

Cadillac Eight Line is Most Comprehensive

The latest creation of the Cadillac Motor Car Co., which will appear on the Pacific Coast in a few days, will follow the same general lines of Cadillac eights of the past three years. The mechanical changes are in the line of refinements, while in appearance the car will be slightly changed. The wheels are smaller, 35x5 being the standard size of the tire equipment. The body is also lower, which adds to the rakishness of all models. The fenders are also re-designed.

In open cars the line consists of the always popular seven-passenger touring car, the four-passenger phaeton, and the standard roadster with rumble seat folding into the deck. The victoria, which proved such a success last year, has been continued with practically no changes other than appear in the chassis.

In the enclosed cars the brougham model is most modern. The rear seat accommodates three passengers, while the two forward seats are of the individual type with a passage between. The standard limousine and the imperial limousine will continue to be Cadillac leaders. One unique feature of the Cadillac enclosed models of the limousine and landaulet types is the dictograph used for communicating with the driver instead of the old style speaking tube or telephone.

In addition to the standard seven-passenger limousine there will be a new model, a town limousine for four passengers and with two auxiliary seats. The limousines, landaulets and town cars have a 132-inch wheelbase and the open cars, brougham and victoria 125 inches.

Estimating the Demand for Tires and Tubes

The average dealer in accessories in a small town is naturally very conservative in the matter of laying in a stock of tires and tubes. Frequently he errs on the side of too small buying. A dealer desiring to ascertain the sales possibilities open to him, says John Morgan, vice-president of the McGraw Tire & Rubber Co., East Palestine, O., may arrive at a very close estimate by multiplying the number of cars in his town by 5. Take a town in which there are 200 cars. The average sales possibilities in this town are 1000 tires a year. At an average profit of \$7.50 per tire, the tire sellers of that town may reasonably expect to add \$7,500 to the right side of the ledger during the year. These figures are based on the average profit of McGraw tire dealers in various sections of the country.

Mr. Morgan estimates that the 4,000,000 automobiles in this country will use during the year 1917 no fewer than 24,000,000 tires and over 30,000,000 tubes, and that the demand will increase at the rate of 40 per cent annually.

The McGraw products—Pullman, Imperial, McGraw and Congress tires—are sold through wholesale jobbers only, thus assuring the dealer quick deliveries and good service. In addition the company maintains a modern merchandising department to help the dealer sell McGraw products intelligently, so that the turn-over is from five to twelve times a year.

PISTON SERVICE



Light Weight, Any Make

Cast Iron Pistons

Are the BEST by TEST

FINISHED

SEMI-FINISHED

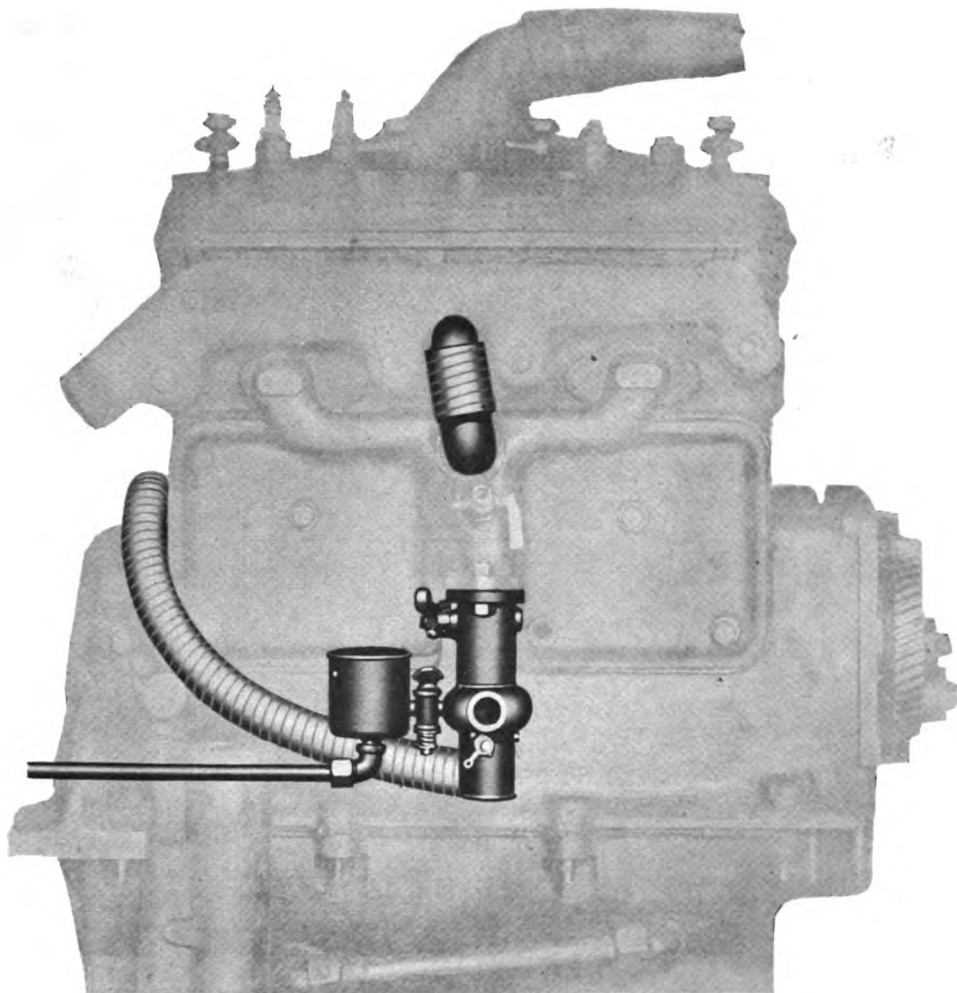
or ROUGH

LARGEST PRODUCERS IN THE WEST

W. H. JAHNS AUTO MACHINE WORKS

908-912 West Pico St.

Los Angeles, Cal.



DETROIT KEROSENE CARBURETOR FOR FORD CARS

The Detroit Kerosene Carburetor makes it possible to use kerosene (coal oil) as a motor fuel.
The simplicity in the scientific construction of this carburetor for low-grade fuel makes for its efficiency.

THE DETROIT KEROSENE CARBURETOR

Is non-adjustable—
Throttles down smoothly—

Idles without loading—
Increases mileage—
Is a positive fuel and money saver—

Makes no condensation in cylinders and—
Reduces speed changing—

While the average mileage of a Ford with standard carburetor is 18 miles per gallon—gasoline, costing 21c; the average mileage with Detroit Kerosene Carburetor is 25 miles per gallon—kerosene, costing 10c.

In other words:

100 miles cost	\$1.16 on gasoline
Against40 on kerosene
Which is a saving of.....	.76 on 100 miles

Price—\$22.00 f. o. b. Detroit (Detroit Bank Check, Postal or Express Money Order), including gas tank, flexible tubing, brass tube and couplings, ready to be attached.

Sold with ABSOLUTE GUARANTEE on thirty days' trial or MONEY BACK.

In these days of strict economy, you should act promptly, not only for the sake of saving money, but also for the conservation of the country's gasoline resources.

DETROIT KEROSENE CARBURETOR CO.

KRESGE BLDG., DETROIT



Front view of Sedan.

Sedan with ALL-YEAR Top Detached.

Wide aisle between front seats.

Showing perfect blending of ALL-YEAR Top and body.

Aeroplane view, showing comfortable, roomy tonneau and wide seats.

Easy to get in and out through unusually wide doors.

With new Semi-Victoria Style Summer Top down.

Kissel's Latest Triumph

THE 4-passenger *Sedan* combines the comforts of the Sedan with the utility and economy of the Roadster.

The new ALL-YEAR Top is not only entirely removable, but all side windows may be lowered or raised—an exclusive Kissel feature.

Ample space between wide seats and aisle; plenty of room to get in, out and about. Interior furnished with many individual appointments and upholstered in exclusive motor weaves. The ALL-YEAR Top is **built-in**, not on, with no visible fastenings or attachments—no rattles, draughts or leaks.

Hundred Point Six

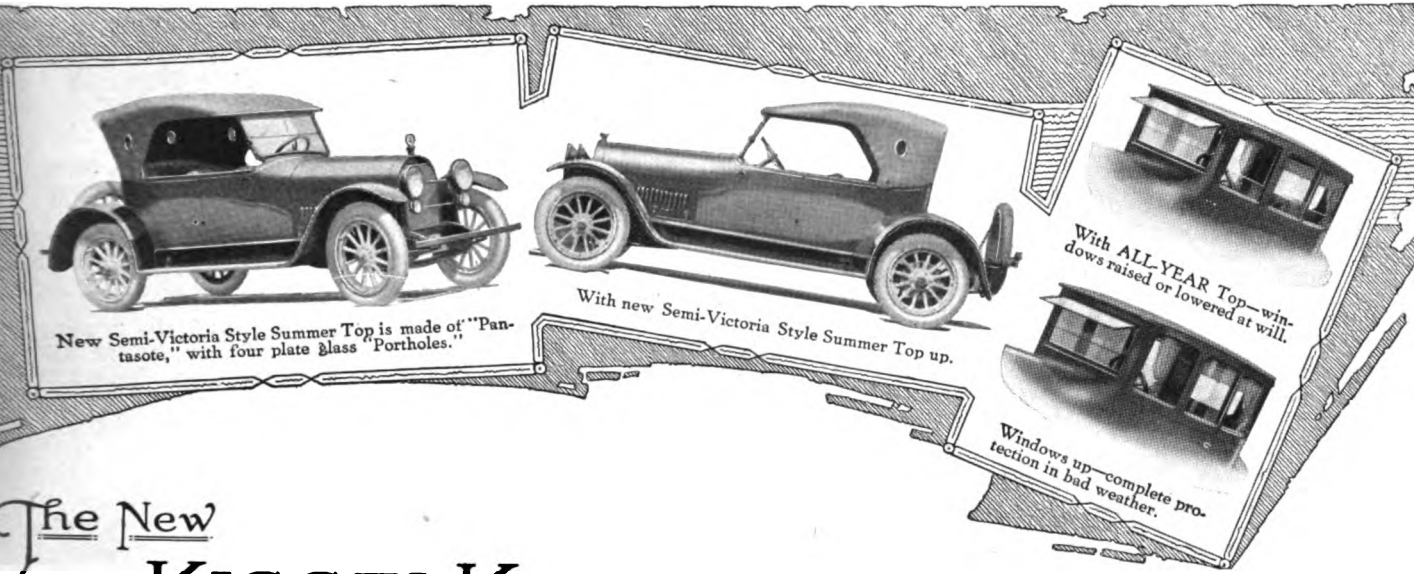
The car of a Hundred Quality Features on which the new *Sedan* is mounted. Inspect the reliable Kissel-built Power-plant. Note its many mechanical features that insure low up-keep and high tire and gasoline mileage.

Your nearest KisselKar dealer is now showing the new *Sedan*. See and inspect it or write us for literature.

DEALERS: You can readily appreciate the unusual demand the *Sedan* will create in your territory. Write or wire us today for agency details. Don't delay.

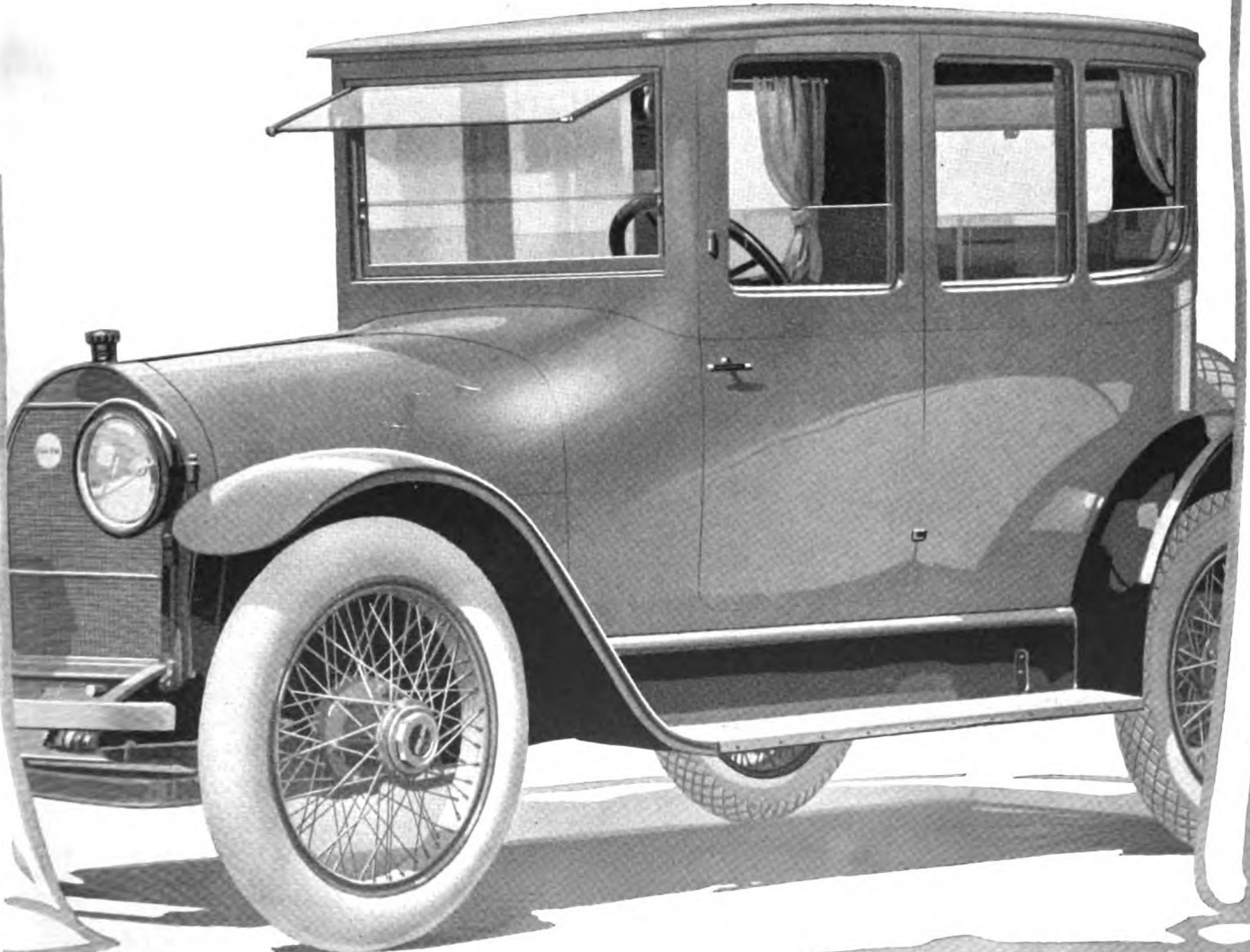
Kissel Motor Car Company

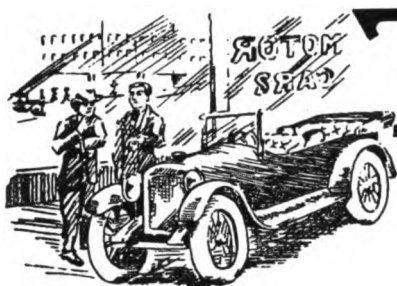
Hartford, Wisconsin, U. S. A.



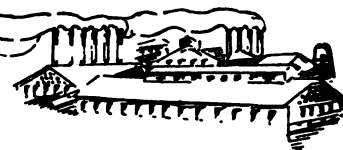
The New
KISSELKAR
* 4 Passenger *
Sedané

The latest development of
Kissel's original idea that
changed the motoring habits
of a nation.





Trade Briefs and Factory Gossip



Flanders Denies Chalmers Rumor.

Walter E. Flanders, who is at the head of the combined Maxwell and Chalmers companies, has given a most emphatic denial to reports and rumors stating that the manufacture of Chalmers cars is to be discontinued. He points out that there are thirty automobile companies turning out touring cars and roadsters selling for between \$1,100 and \$1,500, and states that he is willing to back up with \$200,000 his belief that the Chalmers company under Maxwell management will stand ahead of fifteen of these companies in its 1918 production and surpass twenty in 1919.

* * *

Briscoe "Does Bit" in Big Way.

Benjamin Briscoe, president of the motor car manufacturing company bearing his name, a pioneer and one of the most prominent men in the automobile industry, recently suggested that a commercial commission of experienced business men be sent abroad to cement trade relations with our allies. The suggestion met with great favor at Washington, with the result that such a commission, numbering 200 in all, including managers, department heads and clerks, will sail soon. A number of men prominent in the automobile industry will be on the commission.

* * *

Schrader Employs Patriotic.

Among the manufacturing concerns in the automobile industry which have distinguished themselves for the whole-hearted support extended to the Government in its recent Liberty Loan campaign, the firm of A. Schrader's Son deserves particular mention. Although generous subscribers to the first loan, the employees responded with enthusiasm to the invitation to subscribe again, and when the list closed a total of \$365,000 in subscriptions had been pledged.

* * *

Goodrich Strengthens Material End.

The B. F. Goodrich Co., Akron, O., has issued \$15,000,000 in notes, bearing 6 per cent interest and due within two years. The new capital will be used to facilitate the carrying of unusually large inventories of raw materials with which manufacturing output will be secured against interruptions caused by demand for tires from the trade and the uncertainty of regular rubber shipments from the Far East. The notes have been absorbed by a private banking syndicate.

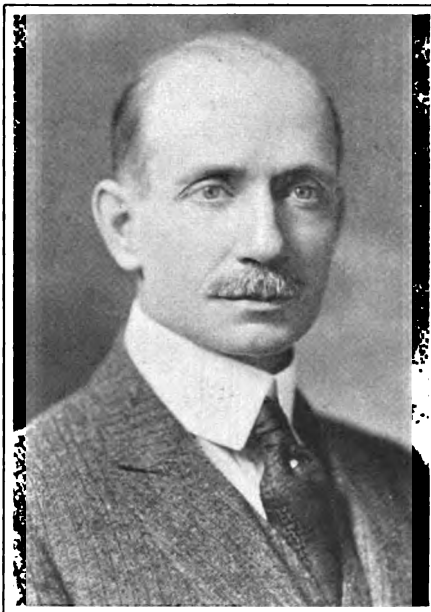
Loeffler to Sell Duplex Trucks.

H. M. Lee, president of the Duplex Truck Co., of Lansing, Mich., announces that Herman Loeffler has become a member of the Duplex sales department. Mr. Loeffler was connected with the Fairbanks-Morse Co. for ten years, and for the last three years has been associated with the Novo Engine Co. of Lansing.

* * *

Taneyhill Goes to Detroit Body Co.

W. H. Taneyhill, who was general sales manager of the Scripps-Booth Motor Car Co., has severed that connection with that company to become



W. H. TANEYHILL

Sales Manager Detroit Weatherproof Body Co., Detroit, Mich.

sales manager of the Detroit Weatherproof Body Co., Pontiac, Mich. Because of the rapidly-growing demand for its product, the Detroit Detachable Weatherproof Top, the Detroit Weatherproof Body Co. urgently needed Mr. Taneyhill's merchandising ability, and his influence as sales manager of that company is already being felt.

* * *

8000 Elgin Cars Built in 1917.

C. S. Rieman, vice-president and general manager of the Elgin Motor Car Corporation, states that his company, which built but 631 cars in 1916, has turned out 4,145 cars from January 1 to October 11 of the present year. The company figures that the output for 1917 will be close to the 8000 mark.

Harroun Motors Broadens Scope.

After a period of gradually increasing production, the Harroun Motors Corporation, Wayne, Mich., has built a complete equipment of demonstrating cars which, shipped to Harroun distributors in all sections of the country, have been driven many thousands of miles and have proven themselves thoroughly able. In gasoline economy and in rapid acceleration the record of these cars has been especially remarkable. Recently added moneys give the company a liquid capital of approximately \$1,000,000—a sum fully ample to keep a large stream of parts and materials flowing into the \$1,250,000 plants of the corporation. Further strength has been given the directorate by the addition of L. E. Moses, A. L. Harroun and Howard F. Lea, of Kansas City, who represent a group of financiers of prominence in Kansas City and the Southwest. With the advent of its greater manufacturing activities, the executive and sales offices of the corporation, hitherto in Detroit, have been moved to Wayne, where all Harroun activities will hereafter center.

* * *

Bailey to Handle Own Distribution.

The George D. Bailey Co., Chicago, has been incorporated for \$25,000 to manufacture the Bailey ball-thrust bearing and has also taken over the distribution of Bailey products, which it will henceforth market direct to dealers and jobbers. The Ahlberg Bearing Co., formerly exclusive distributor for Bailey products, will continue to handle the line. The Bailey ball thrust bearing is manufactured to replace the flat thrust washer used as standard equipment at the left gear side of the Ford and Chevrolet differentials, together with the Rayfield coupling for magneto, generator and pump shafts.

* * *

Akers, Sales Manager of Reo Co.

Richard H. Scott, vice-president and general manager of the Reo Motor Car Co., announces the resignation of R. C. Rueschaw as sales manager of that concern, and the promotion of Forest H. Akers, the present assistant sales manager, to the position. Mr. Akers has been with the Reo Co. for several years, first as traveling district supervisor, and latterly as assistant sales manager in the Lansing office. He is personally acquainted with every Reo distributor and dealer and is thoroughly conversant with the Reo policies and product.

What They All Say Must Be True

—and most of the large manufacturers concede that the big line of rubberized, waterproof fabrics made by the L. J. Mutt Company, is the most desirable, the most attractive, the most durable, and the most practical in the manufacture of automobile tops, upholstery and side curtains. *Our specialties—such as*

Bull Dog Quality Fabrics



are absolutely guaranteed, and are the standard by which comparisons are made.



DrideK is a *waterproof* material, in leather or rubber finish, that is ideal for automobile tops. Send for samples and prices. They will interest *you*!

L. J. MUTT COMPANY
BOSTON, MASS.

SCOVEL IRON STORE COMPANY, *Pacific Coast Agents*
SAN FRANCISCO, CALIFORNIA

Studebaker Adds to South Bend Plant.

The Studebaker Corporation has nearing completion several new buildings and enlargements of the present buildings at its South Bend plant. These will enable the company to care for increased automobile production. The new structures include a machine shop, foundry and power plant. The South Bend plant covers about 110 acres, and the new buildings, when completed, will make this one of the largest automobile manufacturing plants in America.

* * *

Miniger, a Willys-Overland V. P.

C. C. Miniger, president of the Auto Lite Co., has been appointed a vice-president of the Willys-Overland Co., of Toledo, effective November 1. Mr. Miniger will devote his time to assisting Mr. Willys in the general management of the Overland business.

* * *

Drysdale Joins Cleveland Tractor.

K. P. Drysdale, for the last twelve years advertising manager for the Cadillac Motor Car Co., has resigned to become director of sales promotion for the Cleveland Tractor Co., Cleveland, O.

* * *

Sarver in Charge of Scripps-Booth.

A. H. Sarver is now in charge of the Scripps-Booth Corp., Detroit, during the vacation of Clarence H. Booth, still nominal president of the company. At a forthcoming meeting of the company it is probable that Sarver will be elected to succeed as president.

Peerless Earnings \$200,000 Monthly.

The Peerless Motor Car Co., Cleveland, O., is reported to be earning at the rate of \$200,000 monthly and has increased its production capacity 50 per cent. The progress of the passenger car business has been fair, but necessarily curtailed by the huge demand for Peerless trucks for government work. It is reported the Peerless company will soon commence to build airplane parts.

* * *

Dorris Capital Now \$1,000,000.

The Dorris Motor Car Co., St. Louis, Mo., has increased its capital from \$330,000 to \$1,000,000 to handle increased production and to carry on a more comprehensive manufacturing campaign. H. B. Krenning, who has been president since the company was organized in 1905, has retired, and W. L. Colcord, of the Colcord-Wright Machine Co., of St. Louis, has succeeded him. G. P. Dorris, vice-president and engineer, continues in this dual capacity.

* * *

Altree Resigns From Bosch Co.

Arthur H. D. Altree, of the Bosch Magneto Co., who was their branch manager in Chicago for three and one-half years, and who, in the early part of 1914, was transferred to the main office in New York as vice-president, has handed in his resignation, to take effect January 15th next. His experience in the organization and control of credits, sales and service has been very considerable.

* * *

Elgin Well Prepared for Future.

C. S. Rieman, vice-president and general manager of the Elgin Motor Car Corporation, Chicago, states that the company has on hand parts, material and cars in course of construction all paid for, to the value of approximately \$1,000,000. All of the material was bought under old contract and at prices much lower than prevail today. The last financial statement of the company showed cash on hand of \$321,859.98, with total assets of almost \$3,000,000.

* * *

Chandler Output One-Third Greater.

The Chandler Motor Car Co., Cleveland, O., shipped 14,000 cars during the nine months' period ended with September. This production is one-third greater than that of Chandler cars for the same period of last year. During the entire year of 1916 the total output was 13,073. The present prosperity of the company is easily seen in the fact that it will pay an excess profits tax of about \$800,000 on its 1917 business.

* * *

Olin Joins Lancaster Tire.

E. H. Olin, former representative for the Diamond Tire division of the B. F. Goodrich Co., Akron, O., has resigned to join the Lancaster Tire & Rubber Co., Columbus, O., as district manager. He will take charge of the company's advertising at the same time. Olin has been for eight years connected with the Chicago, Minneapolis and Pittsburgh branches of the Goodrich company.

* * *

Casco Pumps for Oakland Cars.

The Oakland Motor Car Co., Pontiac, Mich., has placed an order for 10,000 Casco engine-driven tire pumps. The Casco is handled by the Edward A. Cassidy Co., who convinced the Oakland company of the desirability of Casco pumps as equipment on Oakland cars after searching tests.

* * *

Cadillac Co. is 15 Years Old.

The Cadillac Motor Car Co. recently celebrated its 15th anniversary. During its lifetime the company has built more than 130,000 cars. The value of its product has been \$245,000,000. More than 52,000 eight-cylinder cars have been built, and before the end of this year the number will pass the 60,000 mark. The value of the eight-cylinder Cadillacs marketed is well over \$100,000,000. From a small one-story building, the Cadillac plant has grown until it now covers 1,000,000 square feet. There are 3,500 machines used in the plant, and more than 60,000 special tools, jigs and dies. The number of commercial tools used is over a half-million.

* * *

Batchelder With Burd Ring Co.

F. C. Batchelder, well known in automobile circles and until just recently with the White Co., Cleveland, O., has been appointed factory representative of the Burd High Compression Ring Co., Rockford, Ill.



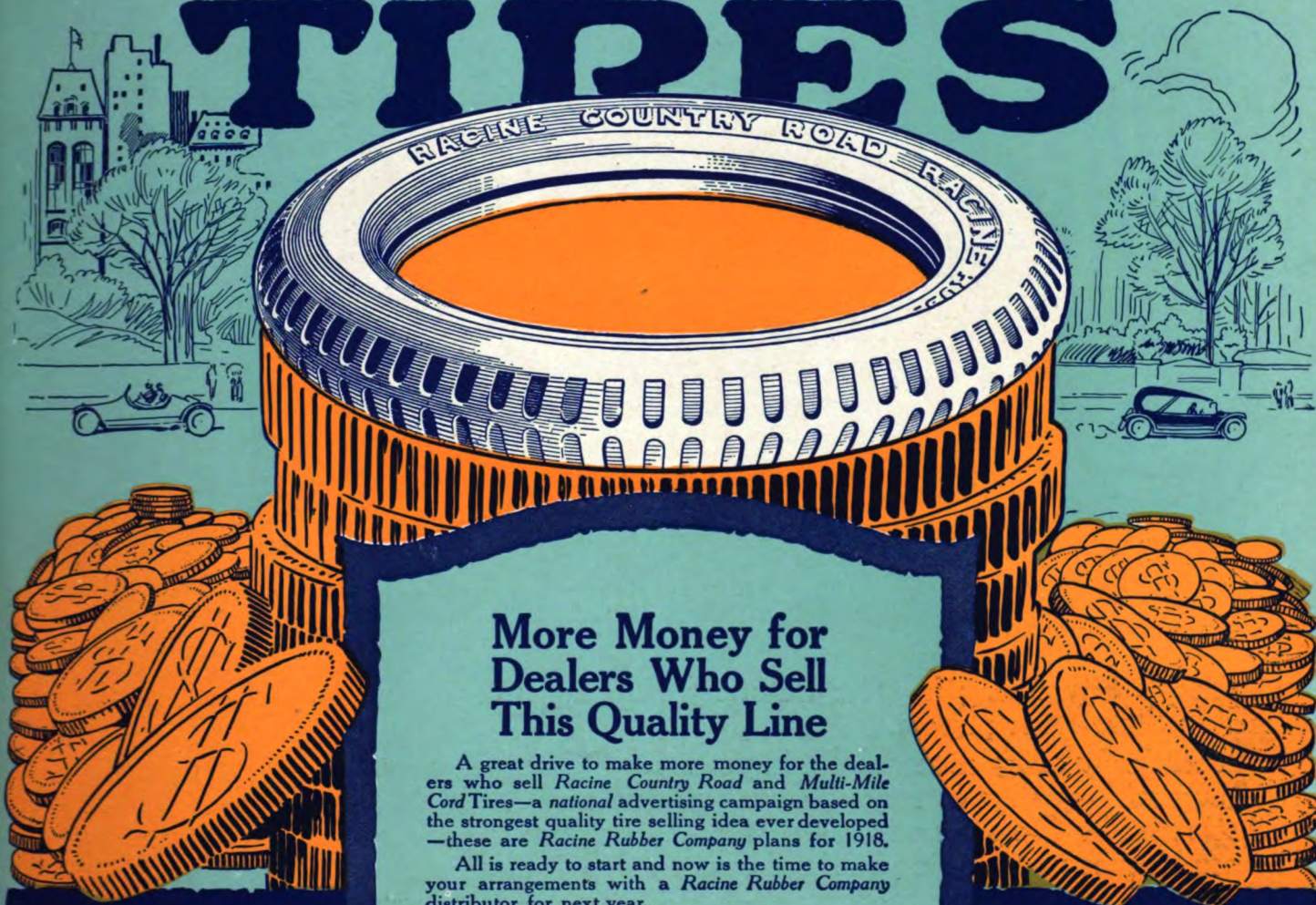
HOW THE FISK RUBBER CO. KEPT TABS ON ITS LIBERTY BOND DRIVE.

The purchase of Liberty Bonds by 97 per cent of the employees of the Fisk Rubber Co., at Chicopee Falls, Mass., was a display of patriotism which has set a high mark for communities and industries all over the country. The seven-day drive in which this remarkable record was made closed with a total subscription by the Fisk employees amounting to \$333,200. This averages a \$65.07 subscription for every one of the 5,121 subscribers. One feature of the Fisk campaign which served to stimulate and maintain the interest was a large billboard, 24 feet by 8, which showed the daily percentage standings of the various divisions. This developed rivalry and spurred the men to do their best for Uncle Sam. The gross amount of the subscriptions day by day were recorded on a clock surmounting the billboard. The first clock with its capacity of only \$200,000, at first thought adequate for the whole campaign, was unable to carry the load longer than the first 24 hours, and another clock with a maximum capacity of \$350,000 was hastily erected. Special editions of the factory newspaper were issued during the drive, and had a marked effect in bringing about the gratifying results.

RACINE

Country Road & Multi-Mile Cord

TIRES



More Money for Dealers Who Sell This Quality Line

A great drive to make more money for the dealers who sell *Racine Country Road* and *Multi-Mile Cord* Tires—a national advertising campaign based on the strongest quality tire selling idea ever developed—these are *Racine Rubber Company* plans for 1918.

All is ready to start and now is the time to make your arrangements with a *Racine Rubber Company* distributor for next year.

YOUR SUCCESS IS CERTAIN

Our plans are made with the definite purpose of making dealers who sell *Racine Country Road* and *Multi-Mile Cord* Tires, the most prosperous tire dealers in their business centers.

With no advertising whatever, *Racine Country Road* Tires have built up great demand. Now, with strong national advertising to back up proved quality of both *Racine Country Road* and *Multi-Mile Cord* Tires, even greater success is in store for dealers who sell these tires.

The keynote of *Racine Rubber Company's* advertising is of such importance that it must hit the bull's eye. It must bring numbers of new customers to every dealer who handles this quality line.

COMPLETE QUALITY LINE

Racine Rubber Company brings the dealer a tire for every demand—the famous *Racine Country Road*—5000-mile guarantee—the *Racine Multi-Mile Cord*—a cord tire of extra high quality. Also service-proved red and gray tubes.



RACINE RUBBER COMPANY ADVERTISING



All This Means Money to You

More than fifteen million people a week will be reached by *Racine Rubber Company's* advertising in *The Saturday Evening Post*, *Country Gentleman* and leading State farm papers.

Practically every automobilist in your trade area will be told again and again, the supreme quality of *Racine Country Road* and *Multi-Mile Cord Tires*. These *Racine Rubber Company* advertisements will be *your* advertisements—telling the car owners in your own trade radius how and why *Racine Country Road* and *Multi-Mile Cord Tires* do mean more miles—more service—more satisfaction.

The Thing to Do Is Act! Send the Coupon NOW

Are you content to *watch* the success of dealers who sell *Racine Country Road* and *Multi-Mile Cord Tires*? Dealers who took on the *Racine Country Road* Tire years ago at the start, have stuck to this quality line and are making money. Now—with *national advertising*—greater success than ever is assured.

RACINE
RUBBER
COMPANY
Racine, Wis.

Gentlemen: Please have your nearest distributor furnish details of the *Racine Country Road* and *Racine Multi-Mile Cord Tire* opportunity with the understanding that it will in no way obligate me. Yours very truly,

Name.....
Address.....
City..... State.....

(8)

Co-operation From Distributors


Distributors for *Racine Country Road* and *Multi-Mile Cord Tires* are conveniently located at all principal distributing points. You will find *Racine Rubber Company* distributors top-notch tire men, equipped to make prompt deliveries and give you every co-operation.

You can learn all details of this money-making offer. Use the coupon—and information will be quickly furnished.

Racine Rubber Company

Dept. 8, Racine Wis.

THE DRIVE THAT SENDS BUSINESS AHEAD REPUBLIC TRUCKS



Men who
drive business—the aggressive, forward-going men—are the logical owners of Republic Trucks. They are the men who are not satisfied until they *know* their money is doing its utmost in every investment. That is why such men have put more than 25,000 Republic motor trucks in service.

At Republic Low Prices

You do not know *all* the values your truck money will buy until you have learned what Republic construction with the Republic-Torbensen Internal Gear Drive is doing in every line of business—from one-truck service to fleets of fifty.

Seven models, from $\frac{3}{4}$ -ton to 5-ton capacity, at prices ranging from \$895 to \$4250. Prices f.o.b. factory. Write for book on capacity in which you are interested. We furnish all kinds of bodies.

Address Department AL

Republic Motor Truck Co., Inc., Alma, Mich.

See Your Nearest Republic Dealer

Dealers and Service Stations in
Over 900 Principal Cities

INTERNAL GEAR DRIVE

Jones Enters Commercial Work.

The Jones Motor Car Co., Wichita, Kans., announced November 1st that in addition to manufacturing the Jones line of motor cars it would also engage in commercial contract work. This will include the construction of limousine, coupe, and all kinds of enclosed bodies and tops, also the manufacturing of fenders, upholstery, etc., and bodies for trucks and commercial cars. The Jones Co. has a factory with 125,000 square feet of floor space, housed in six brick buildings, and is now equipped for an output of from fifteen to thirty bodies daily.

* * *

40,000 Republic Trucks in Year.

The Republic Motor Truck Co., of Alma, Mich., will manufacture 40,000 Republic trucks during the coming year, according to the plans of the production department. To care for this increased production, additions to the plant are now under way which will increase the shop floor space 70,000 square feet.

* * *

United Motors Doubles Production.

J. M. Case, sales manager of the United Motors Co., of Grand Rapids, Mich., manufacturers of United Motor trucks and tractors, is authority for the statement that the company has more than doubled its production within the last four or five months, and is increasing its schedule monthly.

* * *

Knobloch With Cleveland Motor Plow

A. F. Knobloch, who recently resigned as vice-president and general manager of the Cole Motor Car Co., of Indianapolis, has become general manager of the Cleveland Motor Plow Co. of Cleveland, which is the enterprise headed by Rolin H. White that is producing the Cleveland tractor.

* * *

Dowse Will Purchase Two Plants.

B. C. Dowse, connected in the past with the G. & J. Tire Co., United States Rubber Co., and the Federal Rubber Mfg. Co., has finally announced a part of his new manufacturing plan. Mr. Dowse has formed the Dowse Rubber Co., with an authorized capital stock of \$2,500,000, and arrangements have practically been concluded to purchase two factories in the automobile field. One of the plants is in Chicago, which will be the home office of the Dowse Rubber Co.

* * *

McClod to Help Buick President.

W. H. McClod, traffic manager of the Buick Motor Co., has been made assistant to Walter H. Chrysler, president of the Company. He has been succeeded as traffic manager by Geo. C. Conn, former freight traffic manager of the Pere Marquette railroad.

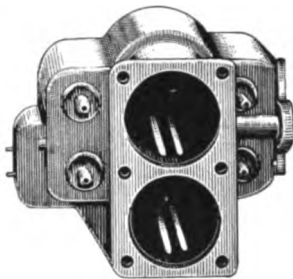
* * *

Hi Sibley Heads Republic Publicity.

Hi Sibley, the newspaper correspondent, is now publicity manager for the Republic Motor Truck Co., Alma, Mich.

SCORED CYLINDERS

Repaired by a
NICKEL CAST IRON ALLOY
ELECTRICALLY WELDED
LIKE FILLING TEETH



NO

-HEATING
-WARPING
-BORING
-RE-GRINDING
-ENLARGING
OF BORE
-CHANGING
OF PISTONS
OR RINGS

Save
75
Per
Cent

All work guaranteed for life of Motor.
Welding and Brazing of all metals.

THE SCORED CYLINDER WORKS
433 Golden Gate Ave., San Francisco, Cal.
Phone, Market 8479

Big Growth in Jordan Shipments.

Shipments of the Jordan Motor Car Co. for the week ending Saturday, November 3rd, were the largest in the history of the organization. Twenty-three cars were shipped on the previous Friday alone. The Jordan Co. in the 24-day period ending October 19th shipped cars valued at \$261,775, and showed a net profit for the month of a little better than 7 per cent. The shipments for October were 27 per cent in excess of October one year ago.

* * *

Chalmers Promotes H. W. Miller.

Harry W. Miller, formerly service manager for the Chalmers Motor Co., Detroit, has been promoted to the position of assistant sales manager and service supervisor.

* * *

Daniels Now Dort Advertising Mgr.

H. S. Daniels, whose services for some time has been employed jointly by the Dort Motor Car Co. and the Dooley-Brennan advertising agency, will hereafter devote his entire time to the Dort organization in the capacity of advertising manager.

* * *

Essex Leases Old Studebaker Plant.

The Essex Motor Co., which was recently incorporated by officers and stockholders of the Hudson Motor Car Co., has taken a lease for three years on the old Studebaker Plant No. Five, in Detroit. The one- and three-story buildings of the group contain 60,000 square feet of floor space.

* * *

Parker Rust-Proof Outfits at Front.

W. C. Parker, of the Parker Rust Proof company of America, has received orders from the government for two complete Parker Rust Proofing units to be sent to Europe with the next division of soldiers going over.

Olympian Absorbs Body-Building Co.

St. Clair Couzens, in charge of sales and advertising for the Olympian Motors Co., of Pontiac, Mich., announces the purchase by that company of the Meridan Mfg. Co. of Indianapolis. The company manufactures bodies, and its effects will be removed to Pontiac, where it will make Olympian bodies at the rate of 20 per day.

* * *

Columbia Six in Three Models.

The Columbia Motors Co., Detroit, will give a large part of its attention for 1918 to its four-passenger sport model, listed at \$1,450. A prominent feature in this car is the heat regulating device, regulated by thermostatic control. Built also on the same chassis are the five-passenger touring sedan at \$1,995 and the five-passenger touring car at \$1,295. The Continental six-cylinder engine, 3 1/4 x 4 1/2, develops 38 horsepower at 2,000 r.p.m. Other details are Stromberg carburetor, Stewart vacuum feed, Atwater-Kent ignition and Willard battery. Wheelbase is 115 inches.

* * *

Mais Developing New Fulton Features

Albert F. Mais, formerly prominent in the development of the Studebaker line of trucks, is engaged in developing some special features to be embodied in the Fulton truck, which he expects to show at the national show next winter, when the Fulton Motor Truck Co., of Farmingdale, L. I., will make special exhibits at the hotels of the 1 1/2-ton line, to which this company confines its attention.

* * *

Many Orders for Air-O-Flex.

A. B. Hanson, director and production manager of the Air-O-Flex Automobile Corporation, of Detroit, announces that the company has already received inquiries from other manufacturers in regard to the Air-O-Flex suspension cylinders, which take the place of springs thus avoiding fabric rupture from shock, and the friction wear of wheels, skidding and spinning. Mr. Hanson announces that the company will soon be ready to furnish these cylinders to other manufacturers.

* * *

Davey Bethlehem Motors Adv. Mgr.

Roy S. Davey, advertising manager of the Chalmers Motor Corporation since last November, has resigned to become assistant sales manager of the Bethlehem Motors Corporation of Allentown, Pa. Previous to his connection with the Chalmers company Mr. Davey was with the Packard Motor Car Co.

* * *

Wells Enters Oakland Omaha Branch.

C. E. Wells has been appointed assistant manager of the newly organized Omaha, Neb., branch of the Oakland Motor Car Co. Wells came to the Oakland Co. from the position of manager of the Baltimore, Md., branch of the John Deere Plow Co., and has been connected with the implement field for many years.

S. F. SEAGER AND COMPANY

(Formerly The Oldsmobile Company of California)

An Old Established Firm With a New Name and New Line of Cars

Mr. Schuyler F. Seager, president of this company, after a thorough investigation of the motor car field, has selected two representative lines behind which he feels he can honestly put the best efforts of his organization.

The organization is proud of its service record and believes every

owner and dealer with whom it has done business is a friend. The new company will follow the same high standard that has characterized the former company in the past. The new business will be conducted by the same organization without any change in its personnel.

JORDAN AND GRANT

The success of this quality car is already an established fact—not only in California, but throughout the country.

The Jordan is a car of extreme beauty and will demonstrate on any road or hill with any stock car made.

The chassis includes all the universally approved mechanical units.

Jordan custom style bodies have established a new ideal in finish and quality of detail. It has distinctive lines and combined with its style is the element of ease and comfort.

Full line of bodies, seven-passenger luxury car, sporting four-passenger, standard roadster, limousine, sedan de luxe and four-passenger coupe.

*New
Models
Now
on
Display*

The buyer who seeks efficiency and economy gets it in the GRANT SIX.

The GRANT SIX averages twenty to twenty-five miles to a gallon of gasoline and 900 miles to a gallon of oil. The tire mileage far exceeds the guarantee.

And in appearance and construction it is a real automobile. There is no more enthusiastic owner than the man who has driven a GRANT SIX ten or twenty thousand miles. It represents real automobile value and the man or woman seeking a high-class car at a medium price should by all means investigate the Grant. Full line of bodies, 5-passenger touring, 3-passenger roadster, and Sedan.

S. F. SEAGER AND COMPANY

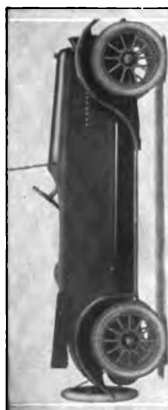
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1205 South Olive Street

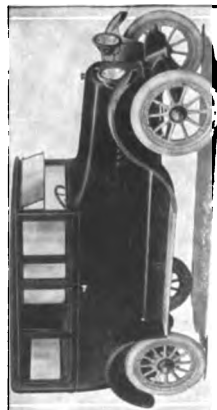
Main 3130



Five passenger touring car,
\$1095—at Chicago



Four passenger "Chummy" roadster,
\$1095—at Chicago



Convertible Sedan. \$1645—at Chicago

BECAUSE live dealers see this advertisement (Proven by the clippings above.)

They recognize that continued success is assured only by selling a good, popular priced car.

The Elgin Six has proven itself to be the most attractive and salable car in the world at its price.

The extraordinary demand that has required an increase in production from 724 cars the first season to 7,776 cars the second season proves that the car buying public recognizes the superiority of the Elgin Six.

New factory buildings to further care for this increasing demand are fast being completed.

Territory is going fast. If yours is not already closed, wire us to hold open until you can discuss the matter with us.

Address Department 25A

Elgin Motor Car Corporation, Chicago, U. S. A.



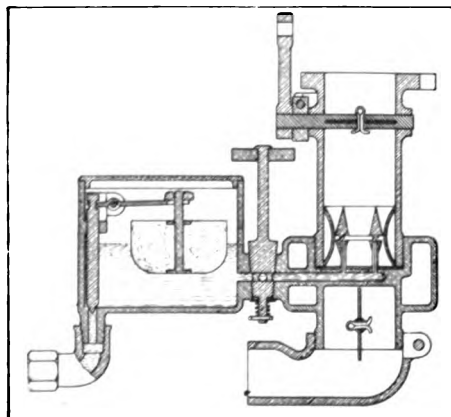
New Elgin factory buildings now being rushed to completion which, when finished, will have a capacity of 100 cars per day.



DETROIT KEROSENE CARBURETOR.

The principles embodied in the Detroit Kerosene Carburetor are entirely new in the line of heavy fuel carburetion, the most distinctive feature being that of the especially formed venturi. Through this peculiar construction, it was found that a destructive eddy was created at this point, and that this eddy action atomizes the fuel into a very fine floating fog.

It is a well-known fact that one of the necessary essentials for kerosene burning is first to atomize the fuel into as fine



CROSS-SECTION OF DETROIT KEROSENE CARBURETOR.

a spray or fog as possible, and by this action reduce the amount of heat necessary to completely vaporize the fuel and form a dry burning gas.

It is also found expedient to raise the temperature of the fuel as high as possible without causing vaporization. This was accomplished by a pre-heater which surrounds the kerosene fuel inlet and jets. Through this pre-heater and the eddy atomizing effect of the venturi, it was found that the fog produced was practically a burning gas, requiring only a very small amount of drying to produce a thoroughly dry homogeneous gas, which would not precipitate in the intake or cylinders.

The use of two venturi and two jets—one for low speed and one for high—makes it possible to use a very high velocity through the venturi at low motor speed, adding to the breaking up effect of the especially designed venturi.

While the small venturi is operating at all times, by the use of the especially designed sliding venturi, as the velocity increases, the second jet is automatically cut in and operates at the higher speeds.

While gasoline is used in starting, it is only for a very short period and depends entirely upon the weather conditions, and only then for the length of time necessary to raise the temperature of the kerosene to a point that will properly vaporize it and hold it in suspension. These features were determined with a fuel delivering the best all around

proficiency without impairing the volumetric efficiency of the motor.

The Detroit Kerosene Carburetor has only one float chamber, but by the use of a three-way valve, gasoline is admitted for starting. To insure a perfect mixture, a fixed or non-adjustable jet is used, eliminating the possibility of mistakes in adjustment, the exact proportion of kerosene being adjusted automatically by the especially designed venturi.

It has been found by a series of exhaustive tests that by the use of the Detroit Kerosene Carburetor, all of the fuel is burned in the motor without any precipitation or carbon formation, pre-ignition, back-firing, or any of the other difficulties with which the use of kerosene is supposed to be associated.

HOW AJAX TIRE CO. HELPS ITS DEALERS.

Widespread interest is being shown in the retail tire field, in the Ajax Dealer's Franchise, announced recently in the advertising pages of "Motor West." Inquiries from substantial dealers in all parts of the country are being received by the Ajax Rubber Co., in response to the announcement of the Ajax Dealer's Franchise.

"The quick response on the part of the tire dealers of the nation to the announcement of the Ajax Dealer's Franchise, was not unexpected," declared H. L. McClaren, vice-president in charge of sales of Ajax Rubber Co., Inc. "We decided upon the Franchise idea because we wanted to give to the tire dealer the same form of inwriting protection that Ajax tires—guaranteed in writing 5,000 miles—give to the tire user."

The announcement of the Ajax Dealer's Franchise also brings the news of a new department—the Ajax Dealer's Free Service Bureau. This department is an organization of merchandising experts whose function it is to help the dealer with his advertising, his merchandising—in fact, in all ways to help him make more money. This service to the dealer, as the name implies, is free. The dealer is entitled to the services of this department from the date of his signing the Ajax Dealer's Franchise.

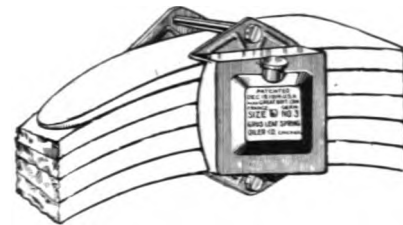
MELLIN'S GEAR-SHIFT EXTENSION.

To obviate the necessity for leaning forward to shift gears, the M. & H. Novelty Co., 857 East 24th street, Los Angeles, is placing on the market Mellin's adjustable gear-shift extension, which consists of an extension lever in three sections, by means of which the operator with a single movement can shift gears easily, quickly and without moving the body. It is claimed that by this device the need for leaning over is eliminated, so that the driver does not have to remove his eyes from the road at any time. The extension lever can be attached in a few moments by simply getting the lock nuts tight. The device is full nickel plated. The company also puts out the Mellin tire lock.

THE GRUS LEAF-SPRING OILER.

The proper lubrication of spring leaves is an essential to the comfortable and economical use of the motor car. Not only do well-oiled springs add to the easy-riding qualities of a car, but they act as insurance against spring breakage, squeaks, rapid tire wear and engine strain.

One of the most recent devices of this character that have been brought to our attention is that made by the Grus Leaf-Spring Oiler Co., of Chicago. This little needful supplies an omission of which the



THE GRUS SPRING-LEAF OILER.

majority of car designers are guilty, and properly applied does all that is claimed for it—perfectly lubricates every square inch of each spring leaf.

These oilers are built in three models—A, B and C. There are four sizes of Model A, ranging in price from 65 cents to 80 cents, and four of Model B, with prices ranging from 95 cents to \$1.10 each. Model C is listed at 45 cents to 60 cents each. Complete Ford sets may be had for \$1, \$1.50, \$2, \$2.80 and \$4.

J. E. Tryzelaar, Pacific Coast representative of Grus Leaf-Spring Oilers, whose headquarters are in Portland, Ore., has recently established a branch at the People's Garage, 742-746 South Olive St., Los Angeles, and is already doing a thriving business in attaching these devices to cars of all makes.

SAFETYFORD STARTER REQUIRES NO HOLE DRILLING.

The Safetyford Starter, manufactured by the Safetyford Starter Co., Inc., Los Angeles, Cal., operates under the pressure of the driver's foot, on the floor pedal. It is not necessary to drill any holes in the car floor, because a suitable one is already in the floors of all stock Ford cars. It automatically disengages itself when the engines starts running or when it back-fires. All of the simple mechanism of the starter is hidden under the hood. The Safetyford sells for \$11 f.o.b. Los Angeles, and for \$14 when installed.

OSGOOD LENSES SANCTIONED UNDER A.A.A. TEST.

Owing to the agitation going on in the Pacific Coast States over recent headlight legislation, every motorist is interested in bringing himself within the legal requirements without the sacrifice of driving comfort and safety. A complete and convenient solution for the night driving problem is to be had through the

AC

Spark Plugs

"Standard Spark Plug of America"

Special for Ford Cars
A C CICO



3/8" Regular for Maxwells
A C TITAN



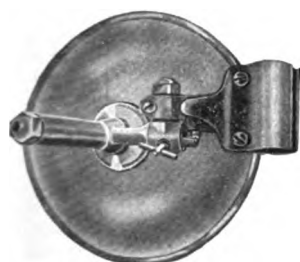
1/2" Regular for Willys-Overland
A C TITAN



1/2" Regular for Studebakers
A C TITAN

AC Plugs have proven to be the best under all conditions. That is why 80 manufacturers of Automobiles, Trucks, Tractors and Aeroplanes use them for regular equipment. The leading race drivers are using them. Your motor will not give its best performance unless equipped with AC. You will come to them in time. Why not buy a set now and note the improvement?

CHAMPION IGNITION CO., Flint, Mich., U. S. A.



Rear View of Silverbeam Spotlight

WILLIAMS' SILVERBEAM SPOTLIGHT

TWO SIZES (6 AND 7 INCHES)

Model A, \$9.00

Model B, \$10.00

Has adjustable control to comply with requirements of the lighting laws of all States. May be used for either left or right side of windshield.

Detachable for Trouble Lamp or for lighting camp at night. Has inclosed dust-proof and water-proof switch.

We sell through jobbers only, and are represented on the Pacific Slope by

HUGHSON & MERTON, Inc.

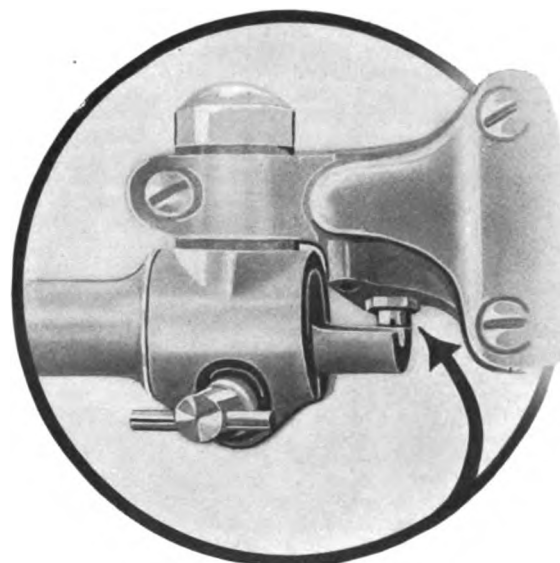
Los Angeles, San Francisco, Portland and Seattle

MANUFACTURED BY

WILLIAMS MFG. CO.

310 North Flower Street

SANTA ANA, CAL.



Detail of Adjustable Control Feature of Silverbeam

8TB Replace Flat Thrust Washers and Remedy Axle Trouble 8TB

BY INSTALLING THE BAILEY BALL THRUST



Every Bailey Ball Thrust Bearing Guaranteed.

Dealers, repairmen and garagemen quickly recognized the advantages of a bearing of this type, and the profitable replacement business, as well as added prestige by installing Bailey Ball Thrust bearings.

Those not already carrying the Bailey in stock will promote their own interests by communicating with any Coast jobber.

Sold through dealers and jobbers only. List price, \$3.75.

HUGHSON & MERTON, Coast Distributors

San Francisco

Los Angeles

Portland

Seattle

8TB GEO. D. BAILEY CO., 1116 S. Michigan Avenue, Chicago, Ill. 8TB



An Exact Replacement. Fits to a 1000th part of an inch

use of Osgood Long-Distance Lenses, which have been sanctioned under A.A.A. tests as fully complying with the provisions of the laws of the Pacific Coast states.

Osgood Lenses control light through twelve horizontal prisms so placed on the inside of the lenses that all of the rays of light are bend downward. It is impossible for any particle of light to arise above the legal limit of 42 inches when measured 75 feet or more ahead of the machine. Two other features of Osgood Lenses are the roughened glass in the center, cutting off the direct glare from the bulb and the vertically set prism which spreads the light widely across the road.

The A.A.A. test established that although the light is projected for one-third of a mile along the road, yet at no point does it arise within the limited 42 inches. The lenses may be had at any Pacific Coast dealer or jobber, or through the Pacific Coast distributor, Consolidated Sales Co., 35 Montgomery street, San Francisco.

PERFECTION AUTOMOBILE WINDOWS.

Los Angeles is becoming quite famous for the quality of the glass curtain lights turned out by the Perfection Auto Window Co., which, owing to the tremendous increase in its business, is about to move from its present quarters at 3429 South Main street to a perfectly appointed factory at Culver City, a suburb. The Perfection Curtain Light was patented July 31 of the present year, and the president of the company, B. W. Yorick, states that already several of the large Eastern companies have contracted for Perfection lights for their top equipment instead of the antiquated and fragile celluloid. These

lights are of beveled plate glass in hundreds of different shapes and sizes, and may be quickly installed in either single curtains or lined tops without removing the top from the car, while the grip construction insures an installation which is leak- and rattle-proof.

The Perfection Light for lined tops has a wooden back for inside frame, and requires no screws to hold it in place; outside the curtain it is held without tacks or glue by the grip construction, and so firmly that it will not tear out.

TWITCHELL GAUGES AS CHRISTMAS PRESENTS.

The perplexing problem of what to give to a motoring friend as an Xmas present is made very easy of solution by the Twitchell Gauge Co. of Chicago, which has prepared a special holly and mistletoe box for use by dealers in "dressing up" the exterior of the container in which the gauge is ordinarily sold. These decorative covers are furnished free to the trade and make a strong appeal when displayed on counters or in windows.

BIG DEMAND FOR RACINE TIRES.

An announcement of vital interest to the tire trade has been made by the Racine Rubber Co., Racine, Wis. For the first time in the history of this old established company, its widely-known products, the Racine Country Road Tires and the Racine Multi-Mile Cord Tires, are to be nationally advertised.

According to H. C. Severance, secretary and general sales manager of the Racine Rubber Co., the first announcement in the motor trade press has brought many inquiries from dealers in various parts of the country. "Without advertising of any kind, save word-of-mouth, Racine

tires," he says, "have been considered by dealers exceptionally good money-makers. Now, with this strong continuous campaign of national advertising, dealers who sell our tires can expect a greater volume of sales than ever."

Production facilities in the Racine factories have been materially increased owing to the rapid growth of the consumer demand for Racine Country Road and Multi-Mile Cord tires, and distributors, located at all principal distributing points, can always carry a complete stock, thus insuring immediate delivery for the dealer.

Many new and practical dealer helps are to be supplied free to dealers selling Racine Country Road and Multi-Mile Cord tires.

COLUMBUS VARNISH CO.'S TRADE CIRCULAR.

Following its usual custom, the Columbus Varnish Co., of Columbus, O., has issued its tenth semi-annual trade circular, which goes to 20,000 automobile dealers, garagemen and supply men each Spring and Fall. This circular sets forth the merits of the entire line of Peerless Automobile Specialties, and any dealer, garageman or supply man who has been overlooked in this distribution will be supplied by writing to the factory.

DYER TOWING DEVICE.

The Dyer Towing Device positively steers the following car. It can be easily attached within a minute's time. This towing device is manufactured in two parts, one of which is to be permanently fastened to the service car or the car towing the other. It is sold for the net price of \$6 and is manufactured by the G. H. Dyer Co., 155 Brookline St., Cambridge, Mass.

For Motor Truck Upholstery



TRUCK SPECIAL

Satisfactorily meets the scarcity-of-leather situation. Costs less than even the poorest split leather but wears better.

Comes in 60-yard rolls, 50 inches wide. Cuts in multiples without waste.

You should use it to save money.

You should use it to save leather.

It is waterproof, washable—and its fine leather appearance and "feel" leave nothing to be desired.



Write for Truck Special Booklet, Samples and Prices

Du Pont Fabrikoid Co.
WILMINGTON, DEL.

Works at Newburgh, N. Y. and
Fairfield, Conn.
Canadian Office and Factory:
Toronto

*World's Largest Makers of
Leather Substitutes*

If You Had
A Hole
In Your Pocket

Wouldn't you stop the leakage of your money! Cheap plugs are money wasters. A weak spark cannot explode all the gas. Install the

HERZ
PLUG

"Bougie Mercedes"

The shooting effect of the explosion chamber behind the Clover Leaf Electrode ensures perfect combustion even of a very lean mixture.

HERZ PLUGS are doubly insulated with Mica and Stone. They are guaranteed. We have stood behind them 23 years.

Ask your dealer for the "Bougie Mercedes" and the Pro-Mo-Tor, a special Herz Plug for Fords.

JOHN D. HOWE, Upland, Cal.,
Pacific Coast Representative

CHANSLOB & LYON CO.,
Los Angeles Fresno
San Francisco Seattle
E. A. FEATHERSTONE
Los Angeles

WEINSTOCK-NICHOLS CO.
San Francisco
Los Angeles

MCCOY MOTOR SUPPLY CO.
San Francisco
Los Angeles



HERZ & CO.

245 W. 55th St., New York

**UNION HARDWARE & MET-
AL CO.,** Los Angeles

GAVIN WILLIAMS CO.
San Diego

KIMBALL-UPSON CO.
Sacramento

Mr. Car Dealer :

"TRADE IN" CARS MAKE
READY SELLING TRUCKS

THE L & B truck converting unit will turn your slow-moving used cars into salable ton and a half, two ton or larger, trucks. L & B will make up units for any specified chassis, avoiding the fault of trying to fit a Studebaker frame to a Ford size attachment. This factory service to car dealers irons out the obstacle in the truck-converting road to used-car profits. Torbensen Internal Gear, Sheldon Worm type and Chain type Axles, in 1½ and 2-ton sizes, in stock. Larger sizes to order.

*Write today, tell us what you have on the floor, and we
will advise cost of making up units to correspond : : :*

L & B TRUCK MANUFACTURING CO.
LOS ANGELES

Office and Salesroom: 1416 So. Los Angeles St.

Factory: 54 S. Boyle

SOME ATTRACTIVE TERRITORY OPEN—LIBERAL DEALER DISCOUNTS

A bore has been defined as a motorist who wants to tell you about his wonderful mileage experience with Kelly-Springfield Tires when you want to tell him about yours.



Kelly-Springfield Tire Co.
Executive Offices
Seventh Ave. at 57th St., New York.
General Sales Department
1900 Euclid Ave., Cleveland, O.

WESTERN TRADE NOTES

Los Angeles, Cal.—S. F. Seager & Co. has been incorporated for \$100,000, subscribed \$300, by S. F. Seager, R. S. Weaver and M. E. Plasterer.—The Turner-Whitford Co., Ross, Detroit and Woods Dual Power car dealer has moved to 2122 W. Pico St.—The Hamilton Tire & Rubber Co. has taken the agency for Lancaster tires.—The Service Truck Co., new Service truck dealer, has located at 940 S. Los Angeles St.—The Dawes Motor Truck Co., new distributor of Utility truck attachments, has opened quarters at 1044 S. Olive St.

Long Beach, Cal.—The Hutchinson Auto Co. has taken the Inter-State car agency.—J. J. Barton has bought the Central Garage.

Santa Barbara, Cal.—Franklin Ritchie, Inc., have taken the agency for Packard cars and trucks.

Exeter, Cal.—Harry Kamp has sold his interest in the Square Deal Garage to Karl A. Machetanz.

Selma, Cal.—P. H. Turner of Turner & Northrup has sold his interest in the Selma Garage to L. W. Davis and J. O. Hagan.

Madera, Cal.—J. L. Freeman has again become owner of the Mariposa Big Tree Garage, purchasing it from D. C. Longwill.

Corona, Cal.—Walter Yance has taken the Willard storage battery service station.

Concord, Cal.—R. Kroneder and Herry Herberd have purchased Agler's Garage.

Sonoma, Cal.—The Bear Flag Garage has taken the Cadillac agency.

Sacramento, Cal.—The James S. Remick Co. has taken the agency for Kelly-Springfield tires.—The J. J. Jacobs Co., Studebaker distributor, will occupy a new building containing 12,000 square feet of floor space.

Ontario, Cal.—The Ontario Auto Electric Works has become a Willard battery service station.

Tacoma, Wash.—The Puget Sound Battery Co., 720 Pacific Ave., has taken the Willard battery service agency.—B. D. Gorrell has taken the agency for Philadelphia storage batteries and has opened quarters at 762 Broadway.

Moscow, Ida.—A. F. Frost has taken the Oldsmobile agency for Latah county.

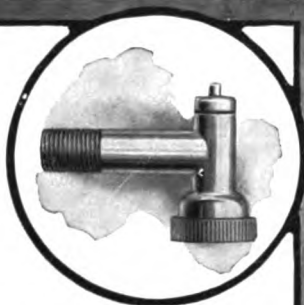
Spokane, Wash.—The Universal Auto Co. will have a garage erected for it costing \$20,000 and containing 12,000 square feet on Second Ave., near Post St.

Sacramento, Cal.—Mrs. James F. Pieper will manage the Marmon and Federal agency business of her husband, James F. Pieper, during his service in the army.

Stockton, Cal.—The Reed Tire Co., Sacramento, has opened a branch here in charge of James Reed.

Fresno, Cal.—The Lichtenberger-Ferguson Co. of San Francisco and Los Angeles, Norwalk tire distributor, has opened a branch here in charge of E. M. Elliott to care for the San Joaquin Valley territory.

YOU CAN'T TELL
HOW MUCH BENGAL
TIGER THERE IS IN
A WHITE RABBIT
UNTIL YOU PUT HIM
ON A MEAT DIET.



—and you can't tell how many miles your tires can give until you put them on a **REGULATED, MEASURED** air diet.

Just so many pounds pressure, no more and no less.

If you pumped up your tires every time they fell below the pressure specified by the tire-maker, they would last for the maximum distance.

Don't say pumping is too much trouble. With a

SCHRADER UNIVERSAL PUMP CONNECTION

it is no trouble at all.

Ask your dealer to show you how it works.

Price Thirty-five cents.

A. SCHRADER'S SONS, Inc.

783-803 Atlantic Ave.,
Brooklyn New York



It's A Mistake

to buy an engine which depends upon batteries for ignition: because your engine's ability depends more upon your ignition system than upon any other factor.

It is essential, then, that you select only the most reliable ignition method.

Magneto ignition has proved to be the most reliable method, and the most reliable magneto has proved to be the

BOSCH MAGNETO

The ignition system which has been on the winner of every worth-while contest of motor cars, motor boats, motorcycles and aeroplanes.

BE SATISFIED

SPECIFY BOSCH

Write for Catalogue

Bosch Magneto Co. :- New York

Coast Branch: 1324 Van Ness Avenue, San Francisco

Coast Distributors: E. A. Featherstone, Los Angeles
Ballou & Wright, Portland and Seattle
Kimball - Upson Co., Sacramento

"NONPAREIL" AUTOMOBILE TRAILERS

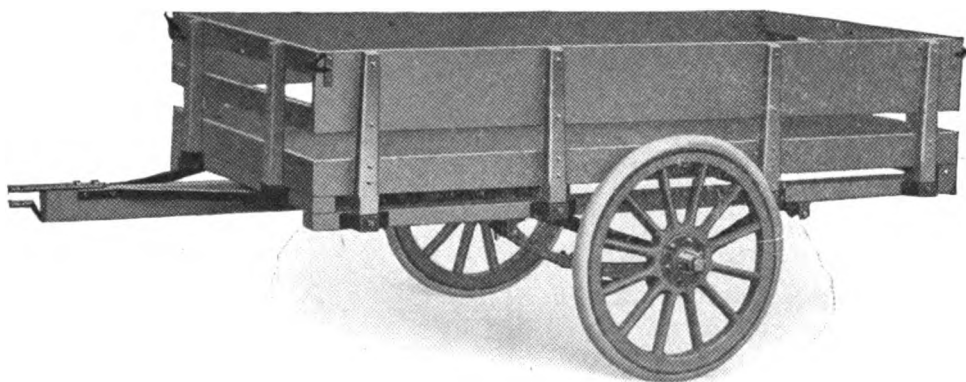
CAPACITIES

A - 1000 lb

B - 1500 lb

C - 2000 lb

TIMKEN
BEARINGS



PRICES

A - \$85.00

B - \$100.00

C - \$115.00

SOLID
TIRES

PRICES ARE F. O. B. SAN FRANCISCO, KNOCKED DOWN AND CRATED

COMPLETE STOCK ALL MODELS FOR IMMEDIATE SHIPMENT

Write for Catalog and Dealers' Proposition

ARTHUR H. HERTZ

Manufacturers Representative

112 Market Street

San Francisco, Cal.

"The Best Oil For Our Cars"

Chevrolet

—J. W. Leavitt & Co., San Francisco—"From our exhaustive tests of Zerolene, we think it is the best oil for use in our cars."

Reo

—American Automobile Co., Tacoma—"tried Zerolene in Reo cars; results so good that we have been entirely converted."

Dort

—Leach-Frawley Motor Co., San Francisco—"excellent mileage with minimum carbonization."

Packard

—Cuyler Lee, Oakland—"Zerolene has given us perfect satisfaction."

ZEROLENE

The Standard Oil for Motor Cars

Endorsed by Leading Car Distributors.

—because the records of their service departments show that Zerolene, correctly refined from California asphalt-base crude, gives perfect lubrication—less wear, more power, least carbon deposit.

Dealers everywhere and at our service stations.

Standard Oil Company
(California)

"The Light That Shows the Road"



The S & M is the only Spot-Lite on the market that complies with the California State Law.

SAFETY FIRST—BUY AN S & M

For sale by all Jobbers and Dealers of Automobile Accessories.

25413

S & M LAMP CO. 117 West 36th Place
LOS ANGELES

San Francisco, Cal.—Collins & Flynn have leased the entire three-story building, containing 40,000 square feet, at Golden Gate Ave. and Polk St., for automobile salesrooms and shops.—F. D. Gould has leased the entire top floor, containing 10,000 square feet, of the building at Golden Gate Ave. and Polk St., for an automobile painting shop.—The Cleveland Auto Co., used car dealer, has located at 512 Golden Gate Ave.—The California Motor Sales Co., new Olympian dealer, has located at 1319 Van Ness Ave.—W. L. Hughson has opened new Ford sales rooms adjoining the Pacific KisselKar quarters.—J. W. Leavitt & Co. have opened service department quarters at State and F Sts.—The Smith Garage, 819-25 Ellis St., has been purchased by A. B. Barkman.—The U. S. Vulcanizer Mfg. Co., has opened a vulcanizing store at 276 Golden Gate Ave.—Richard E. Mittelsteedt has acquired a half interest in the California Tire & Rubber Co.

* * *

Hollister, Cal.—Wilson & Thompson have taken the agency for the Fagaeol truck.—The Hollister Garage has taken the Dodge car agency.

* * *

Davis, Cal.—W. A. Bloodworth has purchased the Hoffman Garage.

* * *

Pasadena, Cal.—The Kendall Auto Co. has taken the Stearns car agency.

* * *

Stockton, Cal.—The W. L. Maxwell Co. has taken the Prest-O-Lite battery service station.

* * *

Hanford, Cal.—Percy E. Taber is in charge of the Chevrolet branch agency here.

* * *

Oakland, Cal.—Mullins & Costello, 2750 Broadway, have been appointed local agents for the Power Rubber Co. of San Francisco, Racine tire distributor.—The Auto Battery Co. has located in larger quarters at 3044 Broadway.



The Best of Batteries


There may still be an opportunity to obtain selling rights in your territory if you act quickly.

Philadelphia Storage Battery Co.
BRANCHES:
1105-7-9 W. Pico St., Los Angeles, Cal.
37 Spear St., San Francisco.



MOTOR West

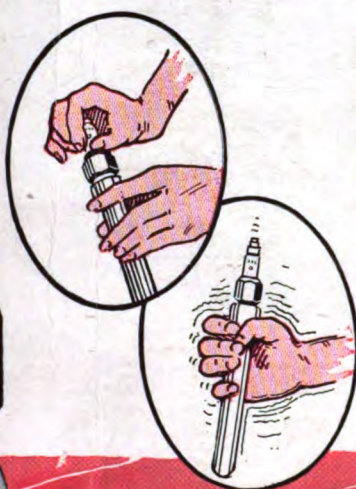
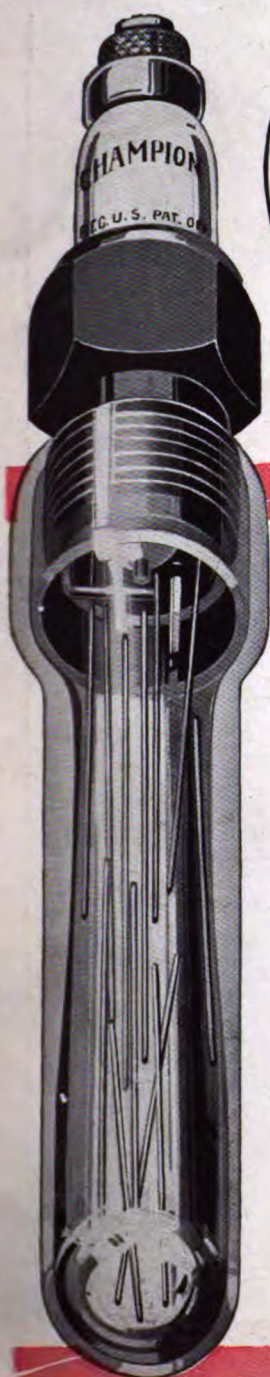
THE MOTORING AUTHORITY OF THE PACIFIC COAST



VOL. XXVIII, No. 4

DECEMBER 1, 1917

\$2.00 A YEAR, 10c A COPY



Champion "Minute" Spark Plug Cleaner

Clean Plugs —and hands clean

WITHOUT taking the plug apart, in a fraction of the time it used to take to *half-clean* your spark plugs, you can now get them *really* clean without even soiling your hands.

Just half fill the tube of the cleaner with gasoline, screw the plug in the socket at the top and give it a vigorous shaking.

The gasoline softens the carbon and the little flying needles pick it off in small particles, leaving the plug cleaner than you could get it in the old laborious way.

Champion Minute Spark Plug Cleaners sell for only 75 cents, come in a neat wooden box that will pack neatly in one's tool case.

They are a ready-selling, money-making article for supply dealers and garage men everywhere.

Any jobber of automobile accessories will supply you.

Write for any information desired.

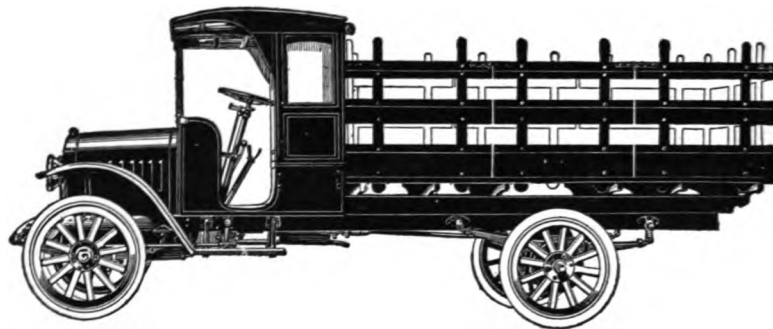
Champion Spark Plug Co., Toledo, Ohio

TOL
F

MAXWELL

**Most Miles
per Gallon**

**Most Miles
on Tires**



Maxwell Trucks Keep Salesmen Busy

The Maxwell one ton truck will make several millions of dollars gross profits for Maxwell dealers this year.

Maxwell dealers made \$12,000,000 gross last year, selling the economical, efficient and popular Maxwell passenger car.

This year our volume of truck production is big enough so that we can place these vehicles—the Marvel of their class—in the hands of all our dealers.

The insistent demand for Maxwell trucks is growing DAILY.

Our dealers will make more this year than they did last year on passenger cars, because they will sell more cars.

And added to this will be the millions in profits from truck sales.

It is an excellent situation for a dealer to be handling a line of SURE SELLERS like the Maxwell cars and trucks.

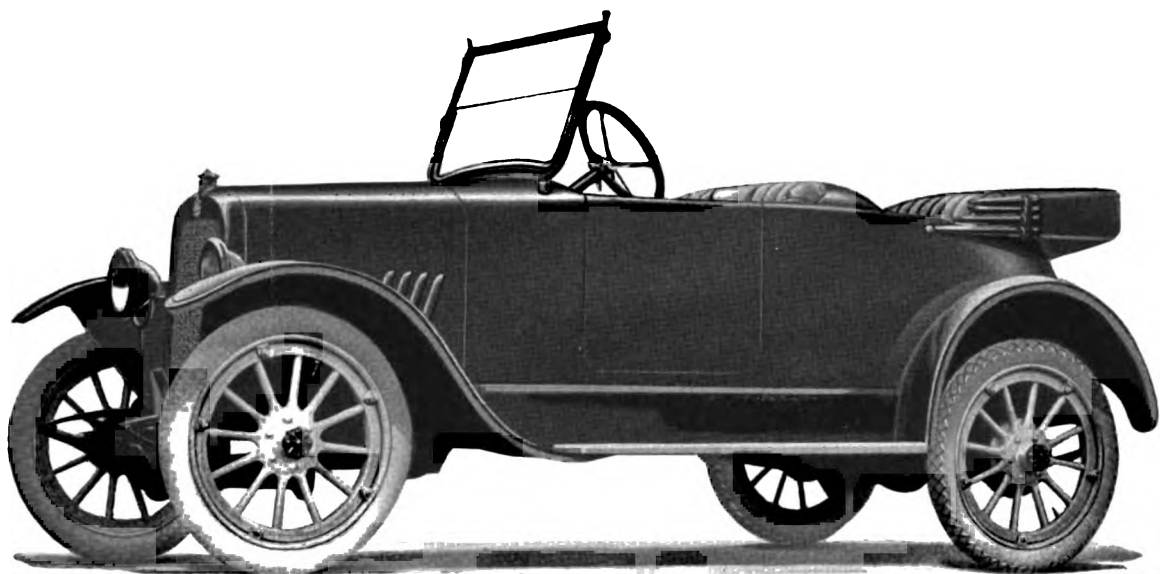
Each of our distributors still has good dealerships to sign up. This is YOUR opportunity.

Maxwell Motor Sales Corporation

Detroit,

Michigan





**“WHY I PICKED THE
WONDERFUL BRISCOE”**

By *[Signature]*

BROWN-WILLSON CO.,
CHICAGO DISTRIBUTORS.

We sized up the light car field—made a thorough study of each car in the class. The evidence overwhelmingly favored the Briscoe.

On this wonderful car with the half-million dollar motor we found those features and extras we would expect only on the higher priced cars.

We tested Briscoe economy—found 25 to 30 miles to the gallon the usual thing—found the Briscoe exceptionally light on tires.

Here, we decided, is the greatest light car value we can offer. We chose the Briscoe—and our ever-growing profits show us we made no mistake.

BROWN-WILLSON COMPANY, CHICAGO.

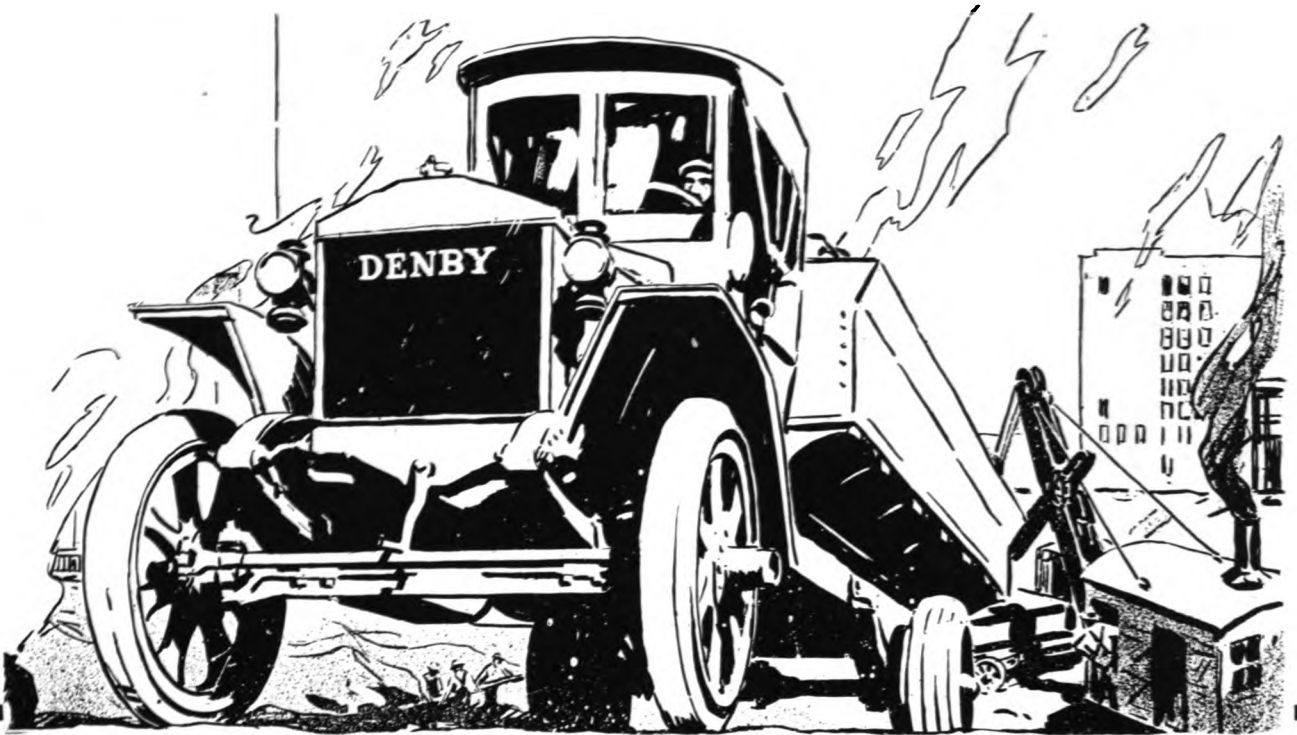
“THE GREATEST LIGHT CAR”

That's the unanimous verdict. Briscoe dealers everywhere are making money. The Briscoe Franchise is worth thousands of dollars a year. Perhaps your territory is open.
Address—

BRISCOE MOTOR CORPORATION

Dept. 133, Jackson, Michigan.

BRISCOE \$725
THE CAR WITH THE
HALF-MILLION DOLLAR MOTOR



DENBY MOTOR TRUCKS

*Pioneers of
The Internal
Gear Drive*

And did you know—

That there are 105 replaceable bushings in the 3-ton Denby, 102 in the 2-ton, and 86 in the 1-ton model?

Capacities:

**1 Ton
to
5 Tons**

Every part that wear will affect is protected by one of these bushings. They can be renewed when worn at a cost of a few cents, and the truck is as good as ever.

They add to manufacturing cost—but they form one of the many ways in which Denby construction saves you money.



Denby Motor Truck Company

DEPT. H.

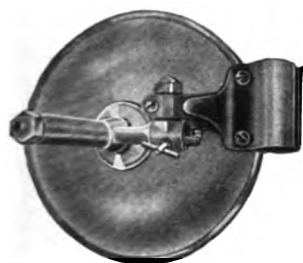
Detroit, Michigan

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for Christmas

The
GIFT
for a
MOTORIST



Rear View of Silverbeam Spotlight

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TWO SIZES (6 AND 7 INCHES)

Model A, \$9.00**Model B, \$10.00**

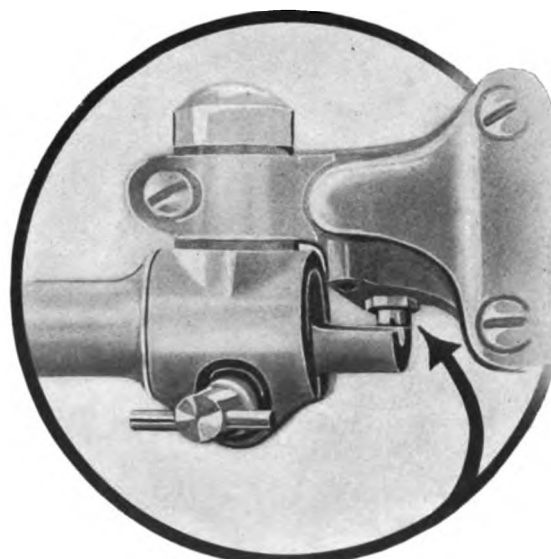
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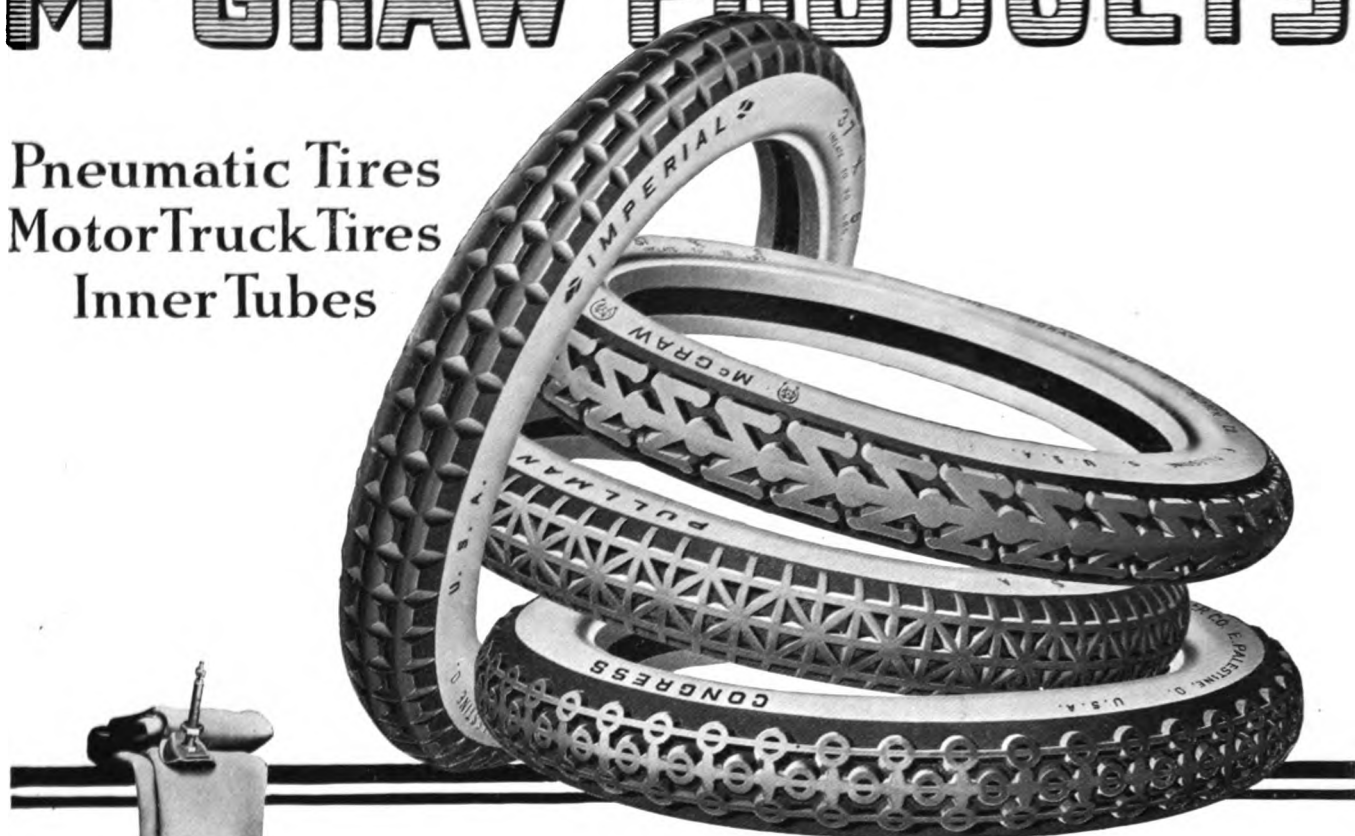
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Detail of Adjustable Control Feature of Silverbeam

McGRAW PRODUCTS

Pneumatic Tires
Motor Truck Tires
Inner Tubes



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Quigley Tire & Rubber Co.	Memphis, Tenn.
Fort Wayne Oil & Supply Co.	Fort Wayne, Ind.
J. N. Johnson Company.	Minneapolis, Minn.
The Harry Svendsgaard Sales Corporation	Detroit, Mich.
Universal Accessories Co.	Indianapolis, Ind.
Beckman Auto Tire Co.	Atlanta, Ga.
Appeal Manufacturing & Jobbing Co.	Los Angeles, Cal.
Goodman Tire Company	Los Angeles, Cal.
W. T. Hale & Son	Dodge City, Kansas

McGraw, Imperial, Pullman and Congress Tires and Inner Tubes give satisfaction to the user and insure a profitable, growing business to dealers.

You will be interested in the details of the McGraw proposition. Write today.



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MOTOR West

THE MOTORING AUTHORITY OF THE PACIFIC COAST

VOL. XXVIII., No. 4

DECEMBER 1, 1917

\$2.00 PER YEAR

GOOD TIMES IN N. W. BRING CAR SALES

Prosperity Universal in the Pacific Northwest, Money Plentiful—Dealers Go East to Hurry Deliveries.

Prosperity is the almost universal condition among the various industries in the Pacific Northwest today, regardless of any slackening in activity which may appear in any other part of the country. Money is said to be in more general and rapid circulation in the Seattle territory than it has been at any time since the height of the Klondyke rush nineteen years ago. While the business activity is probably due primarily to unusually bountiful grain harvests, the rapid growth of the shipbuilding industries is another factor. Men working in the shipyards are getting an average of \$6 a day and even with this inducement it is often impossible to find enough men to do the work required. The volume of automobile sales has risen with a jump. Numerous dealers are ahead of their allotments and are demanding more cars from the factories, some of them visiting the Eastern factories to press their claims.

Elgin Enters Southwest Territory.

The Irving Motor Car Co. of Los Angeles, Cal., has taken the agency for the six-cylinder Elgin throughout Southern California and the state of Arizona. The Elgin car is manufactured by the Elgin Motor Car Corp. of Chicago and is produced in two models, a four-passenger roadster and a five-passenger touring car. The contract for the far Southwestern territory was effected during the recent visit to the Coast of J. P. Winterson, acting as representative for the Elgin company. Two carloads of Elgins are already en route for the Coast. While comparatively a new company, compared with many other long established companies, the Elgin company's

career has been from the start one of rapid, uninterrupted growth. In the second season of production the company has expanded its production from 3,500 to 8,000 cars. Prominent among the chief features of Elgin design is the six-cylinder engine, which is valve-in-head and develops thirty-five horsepower. The Elgin has demonstrated its sturdiness and worth by a series of record-breaking performances. An Elgin six established a new mark when it was driven from Miami Florida, to Chicago, 1,626 miles, in sixty-seven and one-half running hours. In the two days' run held under the management of the Chicago Auto Clubs an Elgin car finished with a perfect score and an average of 25.6 miles to the gallon of gasoline. Recently one of these cars appeared on the Pacific Coast during a 12,000-mile scouting expedition to log the proposed military highways of the United States.

Slack Taken Up From Small Dealer.

Henry Krohn, sales manager of the Paige-Detroit Motor Car Co., expects the curtailment of 40 per cent in the output of passenger cars to clear up the atmosphere of uncertainty wonderfully. He was so quoted while in Portland a week ago. He said that distributors who handle a large volume of cars will not be curtailed greatly in their quotas, but that the slack will be taken up from the dealers able to do only a small business.

Oregon Motor Dept. Congested.

Secretary of state Olcott of Oregon has issued a warning to Oregon motorists that the business of the automobile department of his office is liable to become so congested by Jan. 1 that unless applications are sent in at once it may become a physical impossibility to forward the licenses on the day of receipt of the application. Nearly 49,000 motor vehicles have been licensed in the state for the current year, but with applications for 4,000 licenses for 1918 had been received by the secretary when he issued his warning.

PORTLAND'S SHOW WEEK OF FEB. 6-13

Will Be Held in the New City Auditorium Under Auspices of the Local Dealers' Association.

Portland, Ore., will hold its annual automobile show the second week in February of the coming year, Feb. 6 to 13 inclusive. Greater interest in this year's show than that enjoyed by any previous display in Oregon is confidently expected, for the demand for motor cars is greater at this season than has ever before been the case in the Northwest. The people of the state seem to be just arousing to the possibilities of late fall and winter motoring in the uniform Pacific Coast climate. Money is much more plentiful than was the case last year. The settlement of the shipyards strike has removed a depressing influence, financially and otherwise, and the demand for spruce lumber will put more money than ever into circulation. Practically the whole of the enormous output of spruce required to fill the government's airplane program must come from western Oregon and Washington. In the eastern part of the state the farmers have done well, despite a shortage in the wheat crop, because of the high prices paid for all the wheat they could produce.

The Portland show, held under the management of the local dealers' association, will be staged in the new city auditorium, which covers an entire block. It will provide much more room than was available in the local armory building, the scene of last year's display. Between 175 and 200 new cars will be shown on the first floor and the basement has also been engaged for the holding of a truck show. In addition there will be a display of used cars for the first time at a Portland automobile show.

S. F. CONSIDERING CAR THEFT LAWS

**Board of Supervisors Has Five
Statutes Under Discussion Designed
to Put an End to Thievery.**

As a result of the active fight on the part of automobile men and car owners in San Francisco for the passing of state laws framed to check the heretofore generally successful operations of motor car and tire thieves, the San Francisco board of supervisors has taken five of the proposed anti-car-theft statutes under its favorable consideration. The belief is that the incorporation of these statutes into the municipal body of laws of San Francisco will hasten their adoption by many smaller cities and towns throughout the state, which will be an immense aid in having them finally passed at Sacramento as laws for the entire state. One ordinance would compel all dealers in second-hand motor vehicles and accessories to make a daily record of all purchases, sales or exchanges in these articles to the city police. Another ordinance prohibits the buying, selling, receiving or knowingly having in possession motor vehicles or motor vehicle engines from which the numbers or marks of identification have been removed or altered. The third ordinance would oblige all persons engaged in the business of wrecking motor vehicles to make a daily report of all such transactions to the police. The fourth ordinance compels all garage and repair shop operators to keep a record of all damaged and partially dismantled cars which they receive and handle and file a daily report with the police. Ordinance five will be especially designed to mar the thriving career of the automobile tire thief, but the framing of this law has been hindered by realization of the difficulty of inducing the majority of tire factories to allow their serial numbers to remain on the casings.

Sandow Truck in Spokane Territory.

The Tinkel Motor Truck & Supply Co., Spokane, Wash., has been formed by M. S. Tinkel, L. C. Elder and Edward Jones, to handle Sandow trucks in eastern Washington and northern Idaho.

Phoenix Attachment in Inland Empire

Highhouse & Sandusky of Spokane, Wash., Crow-Elkhart dealers for the Inland Empire territory, have secured the Phoenix truck maker agency from Lawrence G. Nicolai, Coast sales manager.

McNaull Tires Now On Coast.

Readers of "Motor West" will recall that, two years ago, a story appeared in its columns relating the experiences of a transcontinental tour of J. R. Ford, who was making an experimental test of McNaull tires, manufactured in Toledo, O. Mr. Ford arrived at Los Angeles with almost a perfect record, he having experienced but one puncture on his entire travels, covering over 4,000 miles, a large part of which was made in a test through the Colorado Rockies, covering nearly every mountain grade and pass in that section.

Upon his arrival on the Coast, it was Mr. Ford's intention to establish this territory for the McNaull Co., but due to the enormous increase in business in the established territory in the East, his company was unable to make shipments. Since then, an addition to their plant has been constructed, and the output materially increased, and the company has just opened its Pacific Coast headquarters at 500 Van Ness Avenue, San Francisco, under the management of the Cushman Co. A distributing center for Southern California will be opened in Los Angeles within the next 30 days, Nathan Bershon taking charge of that district. Portland and Seattle will immediately follow, so we are advised.

The claims for the McNaull tire are that it reduces friction and eliminates blow-outs and rim-cuts. The tire is 40 per cent oversize and the sidewalls supported by a pair of steel flanges. It carries lower air pressure than the tire of ordinary construction, reduces the road shock, and is much easier riding. It makes an attractive looking equipment on any automobile.

California Has 292,494 Cars.

California has registered 292,494 motor cars and trucks, according to figures issued for November 17 by the state motor vehicle department. They have brought for the year a total of \$2,674,354 in receipts. Automobile dealers doing business in the state numbered 2,298 and paid in fees amounting to \$796. Total receipts to date on taxes collected by the state from the motor vehicle industry amount to \$2,801,394.

Hoelle Forms Own Tire Company.

E. Hoelle, formerly of the sporting goods department of the Pacific Hardware & Steel Co., of San Francisco, has organized the Hoelle Rubber Sales Co., and has taken over the business of J. H. Ahlers & Co., the Century-Plainfield tire dealers for San Francisco. Mr. Hoelle is well experienced in automobile accessories, and especially tires, and has many acquaintances in the trade.

Touring to the Coast in Winter.

The first winter motor car tour between Michigan and California, was begun November 16th when J. V. Templeton and his wife started from the Detroit Weatherproof Body Co.'s factory in Pontiac, Mich., for Los Angeles. The first winter tourists will eat, sleep and travel all the way in their car, which is equipped with a Detroit Weatherproof Top. Templeton, who is connected with the sales department of the Detroit Weatherproof Body Co. will sign up dealers for his company and to put through new contracts for tops with present dealers.

Mrs. Templeton is an experienced driver and will pilot the car half way, while Mr. Templeton will cook half the meals, the wayfarers planning to purchase their food fresh from farm-houses along the route, and cook it on a special stove attached to the motor. Two cots, stretching from the rear of the back seat to the front will be used for sleeping purposes. These will be folded up in the day time, and will thus occupy small space when not in use.

Chevrolet Sub-Branch for Northwest.

Chevrolet cars destined for the numerous dealers handling that make of car throughout the Pacific Northwest will be distributed from a wholesale branch recently opened in Portland by the Chevrolet Motor Co. of California. A four-story warehouse building has been leased by A. L. Warmington, treasurer for the Chevrolet Motor Co. of California and here a large stock of the various Chevrolet models will be kept to fill dealers' orders.

New Grant Retail in Seattle.

Grant Six cars will be retailed in Seattle, Wash., and King County by the Grant Six Sales Co., organized by C. D. Porter and J. W. Waterhouse. Edwin P. Campbell, of the Campbell Motor Car Co., of Seattle, will hereafter concentrate on the wholesale sales of Grant cars.

Master Carburetors Shipped to N. Z.

Two hundred and forty-four Master carburetors, sent in response to the initial order of a dealer in Hastings, New Zealand, were recently shipped by the Master Carburetor Co. of Los Angeles, Cal.

Heads Stewart-Warner Branch.

William Rudolph will succeed J. B. Suess as manager of the San Francisco, Cal., branch of the Stewart-Warner Corp. Suess has left San Francisco and will remain at the company's headquarters at Chicago till after the first of the year, when he will join the aviation corps of the United States army.

Emerson Predicts Big 1918 Season.

P. L. Emerson, sales manager of the Olds Motor Works, of Lansing, Mich., is visiting dealers on the Pacific Coast and securing first-hand information of trade conditions here so that the Olds company will be able to make proper apportionment of the coming season's output for the Coast territory. Mr. Emerson is the most optimistic visitor that has visited this section for a long time. He believes that the coming season will set another new record in the history of the industry, and that the only limit is that of supply in the raw material market. He says that freight cars are available for the Coast business. Mr. Emerson says that the General Motors Co. is preparing to greatly increase the output of its plant, and that this action was taken only after careful consideration of the future prospects and prosperity of the country.

Famous Car Helps Bond Sales.

A big Locomobile of Portland, Ore., is in a fair way to become the most famous war-time car in America. In the June campaign for the sale of the Liberty Loan bonds the big car carried a party of speakers into the remote centers of Oregon population. It was then heralded as the "yellow demon." When the second Liberty Loan came along the car again covered 1,300 miles of Oregon roads and because of the successful sale attending the party the car was named the "million dollar special." Now, Eric V. Hauser, owner of the car as well as of the big Multnomah Hotel and garage at Portland, has presented the "yellow demon" to the Y. M. C. A. team which raises the most money for the "hut" work on the firing line in France. The car which the hotel man has given away originally cost \$5,100. It was rebuilt recently at a cost of \$2,200. Today the "yellow demon" is conceded to be the finest car in Oregon. It is probable that the allied bazaar will sell the yellow car at auction.

Indiana Truck Head Visits Northwest.

C. G. Barley, president of the Indiana Truck Corp., was a recent visitor in Portland, Ore., where he was the guest of F. W. Vogler, president of the Northwest Auto Co., Distributing Indiana trucks in Oregon, Washington, Idaho and part of Montana. Barley said that the business of his company has increased 400 per cent in the past two years.

New Ownership in Spokane Velie.

The Inter-State Auto Co. of Spokane, Wash., is now jointly owned by C. L. Christopherson and B. F. Adair. The firm holds the agency for the Velie car.

Holland with Phila. Storage Battery.

The Philadelphia Storage Battery Co. has acquired the services of Walter E. Holland to take charge of research work connected with the manufacture of Philadelphia Diamond Grid Batteries for use in electric pleasure and commercial cars and starting, lighting and ignition systems on gasoline cars. Mr. Holland for ten years was connected with the Edison interests of Orange, N. J., and since resigning his position of chief electrical engineer of the Edison Storage Battery Co., has had broad experience in the design and application of storage batteries for electric pleasure cars, trucks and industrial trucks, having held the positions of research engineer of the Anderson Electric Car Co., Detroit, and Pacific Coast representative of the Walker Vehicle Co., Chicago, and of the Elwell-Parker Electric Co., Cleveland. The many friends of the Philadelphia Diamond Grid Battery will be glad to know that Mr. Holland's efforts will be directed toward improving still further this already famous battery and adapting it to special needs.

Chandler Man Makes Oriental Trip.

F. B. Keip, factory representative for the Chandler Motor Car Co. throughout the Pacific region, recently visited San Francisco on his return from a tour which took in over 30,000 miles of the Orient. Keip's travels took him to Hawaii, the Fiji Islands, New Zealand, Australia, Tasmania, Java, Sumatra, the Federated Malay States, the British Strait Settlements, Siam, French Indo-China, Hongkong, Shanghai, China, the Philippine Islands and Japan. En route he closed ten Chandler car agencies. American cars, according to Keip, hold up better under the primitive road conditions of the East than European cars, which seemingly are built only for the fine highways of Europe. Java leads all the other Oriental countries in the matter of good roads, having a splendid highway system for almost its entire length. Throughout the Orient the average price of gasoline is 70 cents gold a gallon and that of lubricating oil, \$2 a gallon.

Spokane Market Takes 300 Fords.

The importance of Spokane, Wash., as a motor car market was recently demonstrated when a shipment of 300 Ford cars was hastily rushed to that city to enable local agents to catch up with their orders. P. J. Garnett has been appointed district manager for the Ford Motor Co., with headquarters in Spokane, for the district which includes, in addition to the Spokane territory, western Montana and northern Idaho.

**HAWAIIAN TRADE
CONDITIONS GOOD****Island People Wealthy and Prefer
High-Priced Cars—\$3,000,000 Spent
for Roads—Gasoline is Cheap.**

J. H. Liston, formerly with the Standard Parts Co., of Cleveland, has returned from an extended trip to Hawaii. He found the automobile business in Hawaii and other islands exceptionally good, and was favorably impressed by the absence of cheap cars. The people of the islands are wealthy. Over \$3,000,000 will be spent on roads this year. There is a chance to develop good business there, he says. Rental automobiles are numerous and do a good business at a rate of from \$2 to \$2.50 per hour. The population is 90 per cent Chinese and Japanese and in the near future the islands will be placed under military protection. Mr. Liston found that training camps on the islands had 25,000 soldiers preparing. At Pearl Harbor is located the world's largest and most powerful wireless station, with communication with Sayville, Long Island. The cities are typically Oriental, with narrow streets splendidly paved. The traffic and parking ordinances are similar to those of many American cities. One strange feature he found was the gasoline price, which is 19½ cents at wholesale and 22 cents at retail, in spite of the fact that the gasoline is all brought from California.

So. Cal. Takes 25,156 Cars, 10 Months.

The ten southern counties of California registered 2,538 new motor cars and 211 new motor trucks during the month of October. The month just closed shows a decided improvement over the low registration mark of 1,964 cars and 185 trucks reached in September. October car and truck sales in Southern California were surpassed only by those of January and March, when conditions throughout the entire country were much more favorable than now. During the first ten months of 1917 a total of 25,156 cars and 1,868 trucks have been absorbed by the population of Southern California.

New Tire Store in San Francisco.

Calif & Todd have opened a new tire store at 1942 Van Ness Ave., San Francisco, and will make the Good-year Cord their leader. Mr. Todd was with the Kelly-Springfield Tire Co. for 20 years, while Calif has been a city salesman for several years.

B. C. CAR DEMAND IS STILL STEADY

Approach of Winter Brings No Let-Up Despite Higher Prices—Motor Truck Sales Increase During Year.

Automobile sales in British Columbia are holding up well against the approach of Winter. Since the beginning of June more than 1,500 cars have been absorbed by the Canadian Pacific region and during the month of September 275 cars were delivered to British Columbia buyers. The chief obstacle is in obtaining of deliveries, a condition resulting from the entrance of the United States into the world war. Another difficulty arises from the marked increase made necessary in the prices of American cars. A car selling at \$1,385 f.o.b. factory is retailed at \$1,750 in Vancouver. Other cars coming from the United States have their prices increased in the same ratio. Motor truck sales have increased greatly during the summer, the demand being for all sizes from the light delivery cars and truck attachments to heavy 3- and 5-ton motor trucks.

Claims Running Broad-Jump Record.

The Studebaker dealer in San Luis Obispo, Cal., claims the world's record for that car in the running broad-jump. With a huge crowd lined up on both sides of the main street to witness the spectacular leap, the driver took the incline at a mile-a-minute speed, shooting his car through space for a distance of 79 feet 4 inches. Not a particle of damage was suffered by the Studebaker in the jump—not a bolt loosened and not a single piece of mechanism out of place. No adjustments were made of any kind, either before or after the plunge through space.

Hertz Takes Armleder Agency.

Arthur H. Hertz, located at 112 Market St., San Francisco, has been appointed district manager of sales on the Pacific Coast for the O. Armleder Co., Cincinnati, O., manufacturer of Armleder trucks. The O. Armleder Co. has provided for its export business by appointing David H. Bellamore, 115 Broadway, New York City, as export manager.

Johnson Joins Hanshue-Apperson.

Ernest W. Johnson will assist Harris M. Hanshue, manager of the Apperson branch in Los Angeles, in the firm's retail department.

Kissel Has Large Japanese Order.

The Portland, Ore., branch of the Pacific KisselKar Co. recently did a big stroke of business when it sold Federal trucks and used cars valued at a total of about \$20,000 to Japanese interests. The sale was negotiated by Del Wright, manager of the Portland branch, and A. S. Robinson, Northwest manager of the KisselKar with headquarters in Seattle, but the trucks and used cars have been taken from the stock of the Portland branch. Owing to the lack of trans-Pacific shipping facilities from Portland the cars have been shipped by rail to Seattle, where they will be transferred to one of the Japanese liners.

Couzens Predicts Big Coast Business.

St. Clair Couzens, sales and advertising manager of the Olympian Motors Co., of Pontiac, Mich., has reports from Coast dealers who tell him that it will be possible to place 2,000 Olympian cars in this territory within a year. Mr. Couzens says that there is absolutely nothing the matter with business west of the Rocky Mountains.

Cole Agents in Trans-Bay Region.

The Griffin-MacLean Motor Co. of Oakland, Cal., has taken the agency for the Cole eight-cylinder car in Alameda and Contra Costa counties. The new firm has been formed by L. M. Griffin and L. A. MacLean, who bought out the interest of R. T. Wolford in the trans-bay Cole agency.

Kleiber Truck in Los Angeles.

The Kleiber Motor Truck Co., Los Angeles, Cal., will represent the Kleiber truck in Southern California. The new company, located at 1938-40 South Main street, is headed by J. P. Schielein. The Kleiber truck is manufactured by Kleiber & Co., San Francisco.

White, of Wichita Truck, on Coast.

There dropped in to the "Motor West" office in San Francisco the other day, L. J. White, the clever sales manager of the Wichita Falls Motor Co., of Wichita Falls, Tex. Mr. White is visiting all the Coast branches of his company. He is a specialist in the sales phase of the great Texas truck factory, and his slogan is "The Wichita loves a test." Mr. White avers that the first sale to a house with a big delivery problem to solve is always followed by a "fleet" order.

Denby Agency in Spokane.

Denby trucks will be distributed in the Spokane vicinity and eastern Washington territory by the W. C. Garbe Co., Studebaker representatives.

Decision Favors Anti-Glare Devices.

Devices that serve to eliminate dangerous glare in automobile headlights prohibited by the California state headlight law, and prevent the existence of the offensive "beam of reflected light" expressly defined by that law, are not forbidden by the law. This is the ruling of Judge George S. Richardson of the police court of Los Angeles in the case of C. F. Axelson. Axelson was using in the headlights of his automobile an anti-glare device known as the Warner lens. This device, by means of a number of small lenses upon its obverse and reverse sides, gathers the light rays and so breaks them up and diffuses them that no direct ray of light is projected from the lamps. The police court's decision is said to have been the first one handed down in California regarding the legality of anti-glare devices designed to eliminate headlight glare and project the light no higher than 42 inches above the ground at a distance of not more than 75 feet in front of the car, as required by the state headlight law.

Bacheller Heads Spokane Studebaker.

D. F. Bacheller has been appointed manager of the Spokane, Wash., branch of the Studebaker Corp. of America.

Seattle to Be Showless This Year.

Seattle, Wash., will hold no motor car show this year, it has been decided by local dealers at their regular meeting. The action follows the policy adhered to last year when the organization decided that on account of conditions peculiar to Seattle, a display was not desired.

Leach Branch in Arizona.

The Leach Motor Car Co., Los Angeles, Cal., King car distributor, has opened a branch in Phoenix, Ariz., for the sale of King, Liberty and Premier cars in the state. According to H. C. Bradfield, advertising manager for the King Motor Car Co., who recently stopped over in Phoenix, the factory has shipped 328 King cars into the state during the past year.

Goodrich Phoenix Head Promoted.

H. T. Roseland, former manager of the Phoenix, Ariz., branch of the Goodrich Tire & Rubber Co., has been appointed manager of the company's branch at El Paso, Tex. D. W. Sanford succeeds him as Phoenix branch manager.

Paige Agency Has Oakland Branch.

The Paige Motor Co. has opened its new Oakland, Cal., branch at Broadway and Thirtieth St. Dimensions of the building are 125x115 feet.

Reminiscences of a Hard Trip.

One of the interested visitors at the recent Los Angeles show was D. A. Pike, sales manager of the Pneumatic Cushion Co., makers of the Gruss Air Spring, at 179 Grove street, San Francisco. Mr. Gruss accompanied the San Francisco Ad Club on its pilgrimage to the Ad Club Convention in St. Louis last summer. The car was a Haynes Light Six equipped with Gruss springs. Mr. Pike tells a graphic story of his experiences on that journey. He says:

"The trip from the start was one to try the mettle of any car and put the physical endurance of driver and passengers to the severest test. The rainfall was so persistent and roads so bad that time and again the people in the cities and towns through which we passed tried to discourage us from venturing further on the trip, but we kept on. The bad roads and worse weather conditions prevented the other cars which had started on the trip from finishing it under their own power, so they were shipped over the worst part of the route by freight. By the time we had reached Denver we, too, had given up all hopes of reaching St. Louis before the convention closed, so from that time on we took it easy.

"Considerable advertising and publicity appeared in Coast publications at the time relative to the performance of the various makes of cars that were on the trip. I would like to make it clear," said Mr. Pike, "that the Haynes, equipped with the Gruss Air Springs, which I drove, was the only car that started in the caravan from San Francisco which made the complete trip to the convention city under its own power.

"Furthermore, this car went on and covered 3,200 more miles before it re-

ported to the Haynes factory at Kokomo, Ind. Upon its arrival at the factory, service men looked it over carefully, but found the car in excellent shape, although looking considerably the worse for the wear and tear of the long, hard trip.

"This condition was partly attributed to the power and durability of the Haynes Light Six and partly to the fact that the Gruss Air Springs afford greater flexibility to any motor car. The Haynes underwent no repair work on the trip other than the replacement of a broken axle caused by running into a rock imbedded in a stream while the car was traveling 30 miles an hour."

The Gruss Springs are handled in Southern California by Carter & Vanberg, 775 Towne Avenue, Los Angeles.

Keaton Tire Branch in Portland.

The Keaton Tire & Rubber Co. of San Francisco, Cal., has opened a branch in Portland, Ore., of which James Tormey, formerly manager of the Keaton branch in Los Angeles, will have charge. C. A. Orand will succeed Tormey in Los Angeles.

First Woman Ford Seller in N. W.

Miss Katherine Langeloh, of Spokane, Wash., holds the distinction of being the first woman Ford saleswoman in the Northwest. She recently joined the sales staff of the Traders Motor Supply Co., of Spokane.

Krohn, of Paige, Visits Show.

Among the number of notable visitors to the Los Angeles show was Henry Krohn, general sales manager of the Paige-Detroit Motor Car Co. J. A. McKusker will succeed J. H. A. Campbell as district manager.

McGRAW OUTLOOK VERY OPTIMISTIC

Factory Official, Visiting Coast, Finds Conditions so Good That Enlarged S. F. Quarters Are Necessary.

So insistent is the demand experienced by the McGraw Tire & Rubber Co., East Palestine, O., that R. G. Nelson, director of sales, who is at present visiting the Pacific Coast district offices at San Francisco, says that the factory's capacity has been strained to the utmost. This condition is as true of the country generally as it is of the Pacific Coast, where the McGraw Co. has been represented for two years.

The growth of the company's Coast business has been so regular and so rapid, according to Mr. Nelson, that even though several enlargements have been made to provide for it, it has now become necessary to still further enlarge, and plans have been filed, approved and work commenced on a new warehouse in the wholesale district of San Francisco, which, when finished, will be one of the finest and best-equipped tire plants on the Coast. This expansion is in line with the company's policy to carry stocks sufficiently large to insure prompt deliveries to the distributors of McGraw, Pullman, Imperial and Congress tires and inner tubes.

The new building will be of Class A steel-and-concrete construction, covering an area of over 25,000 square feet, with spur track facilities both in front and rear of the premises. The interior arrangements will be such that maximum efficiency will be assured, as well as provision made for the increased business growth which there is every indication may be anticipated.

The McGraw officials believe that in the light of the present year's business the outlook for the coming year is exceptionally encouraging, and that with the natural development and general conditions obtaining, its Pacific Coast trade will experience an unbounded era of prosperity.

McLain Adds Winther Truck.

The John F. McLain Co. of San Francisco, Cal., has added the Winther truck agency. The company is already well known as distributor of Franklin cars in the Northern California territory.

King Agency for West Washington.

The Parsons Motor Car Co. of Seattle, Wash., will handle the King car throughout the western Washington territory.



D. A. PIKE'S HAYNES, EQUIPPED WITH GRUSS AIR SPRINGS, WHICH SURVIVED AD CLUB TRIP TO ST. LOUIS.



THE DECORATIVE FEATURES OF THE RECENT LOS ANGELES SHOW CONTRIBUTED LARGELY TO ITS UNPARALLELED SUCCESS.

The Seventh Los Angeles Show Was a Record-Breaker

In Point of Attendance, in Artistic Merit and in Amount of Business Done the Recent Exhibition Set an Exceptionally High Standard—Result Considered Remarkable in View of Conditions Due to Uncertainty Caused by War

THE Seventh Annual Los Angeles Automobile Show, which on November 21 ended a nine-day career of unequalled success and popularity, demonstrated first of all the overwhelming extent by which specially built cars, embellished with all the artistic initiative of the exhibitor, have come to predominate in motor car shows, at least in Southern California. The special car detail and the unsurpassed beauty of the recent show stands out above the mere size of the great display, the number of cars exhibited and the volume of attendance, all of which, not unnaturally, have exceeded all previous records in Southern California. One exhibit after another was made up of cars which had been converted from the sober commonplaceness of the factory product into creations displaying all the special points of careful artistry of design which factory standardization is compelled to forego.

The enhancement of the cars exhibited took form in the addition of the most distinctive, original and costly victoria, semi-victoria and permanent tops, in glistening finish that included all shades of color and in light-textured upholstery. The car that retained the familiar, quantity-production appearance that it had in leaving the factory was a decided rarity at the Los Angeles show.

The total attendance of visitors has been conservatively estimated as amounting to more than 90,000 during the nine days of the show. In comparison, the show of last year was viewed by approximately 60,000 visitors. Attendance statistics would probably have passed the 100,000 mark had the Tabernacle and adjoining tents been open to the public on the Sunday closing the first week of the show's duration. The show management, however, conformed to the terms of the lease of the Tabernacle, although the volume of Sunday attendance would, without

doubt, have established a record. The 125,000 square feet of floor space was considered spacious enough to comfortably accommodate the exhibits and a mid-show crowd at its height. The experience acquired during the show would seem to indicate that either the exhibits will be more restricted and less elbow-free as to their own allotments of space, or the total space for the show must be vastly increased. Year by year Los Angeles dealers have found more and more difficulty in securing sufficient vastness of space wherein to display their cars without unduly aggravating the congestion of visitors which must at time necessarily occur. The number of visitors who returned a second, third or fourth time to review a motor car show which far eclipsed that of last year in general interest and appeal to the public exceeded the same class of visitors at the 1916 show by a wide margin.

The bulk of the attendance was composed of residents of Los Angeles, a city which has close to 60,000 motor vehicles on its streets and which has more cars in proportion to its population than any other metropolis in the world. But the recent show was a magnet for the whole of the Pacific Southwest and drew visitors from remote points in Arizona and Nevada. Considering that there are at the present date in the ten southern counties of California alone nearly 130,000 motor cars and trucks it is easily seen that the success of a motor car show is previously assured to a great extent by the fact that the motor car in all its manifold uses has become a part of the natural life and activities of the Southwest.

This year's show, however, attained its success in the face of conditions much less favorable than those prevailing at the time of the show last year. Contrasted with the universal prosperity prevailing in the fall of last year,

the automobile industry in the Southwest faces a falling market induced by the nation's final entrance into the world war which formerly was one of the main causes of its prosperity. Doubt and uncertainty has slowed up the activities of every industry in the land. Yet car dealers at the Los Angeles show are estimated to have transacted a business which exceeded \$200,000, despite other difficulties arising from increased prices on all grades and makes of cars.

340 Exhibitors at New York National Show

The total number of new exhibitors of cars for the New York show which will be held in Grand Central Palace, January 5-12 is thirteen, while the total number of new accessory exhibitors is 127, making a grand total of 95 makes of cars and 245 exhibitors of accessories. The entire four floors of the Palace will be completely filled with exhibits. The Chicago show will be held from January 26 to February 2 and the number of exhibitors is slightly larger than for the New York exhibition. This is a great contrast to the first exhibition held 18 years ago, when only 51 concerns exhibited their products.

The new exhibitors of cars allotted space are as follows: American Motors Corp., Anderson Motor Co., Camden Motors Corp., Comet Automobile Co., Dixie Motor Car Co., Inc., Doble-Detroit Steam Motors Co., Harroun Motors Corp., Maibohn Motors Co., Monitor Motor Car Co., Moore Motor Vehicle Co., Olympian Motors Co., Pan-American Motors Corp., and Stanley Motor Carriage Co.

The following makes of cars, as members of the National Automobile Chamber of Commerce, will exhibit at the shows: Gasoline—Abbott, Allen, Apperson, Auburn, Austin, Briscoe, Buick, Cadillac, Case, Chalmers, Chandler, Chevrolet, Cole, Columbia, Crow, Davis, Detroit, Dodge, Dorris, Dort, Elgin, Elkhart, Empire, Fiat, Franklin, Grant, Glide, Hackett; Hal, Haynes, Hudson, Hupp, Interstate, Jackson, Jordan, King, Kissel, Kline, Lewis, Lexington, Liberty, Marion-Handley, Marmon, Maxwell, McFarlan, Mercer, Mitchell, Moline, Monroe, Moon, Nash, National, Oakland, Olds, Overland, Owen, Packard, Paige, Paterson, Peerless, Pierce-Arrow, Premier, Regal, Reo, Roamer, Saxon, Scripps, Standard, Stearns, Stephens, Studebaker, Stutz, Velie, Westcott, Willys, and

Winton. Electric—Anderson, Baker, Milburn, Ohio, and Wood. The Glide, Dorris, Hackett and Stephens will be shown at Chicago only, while the Kline will be exhibited at New York only.

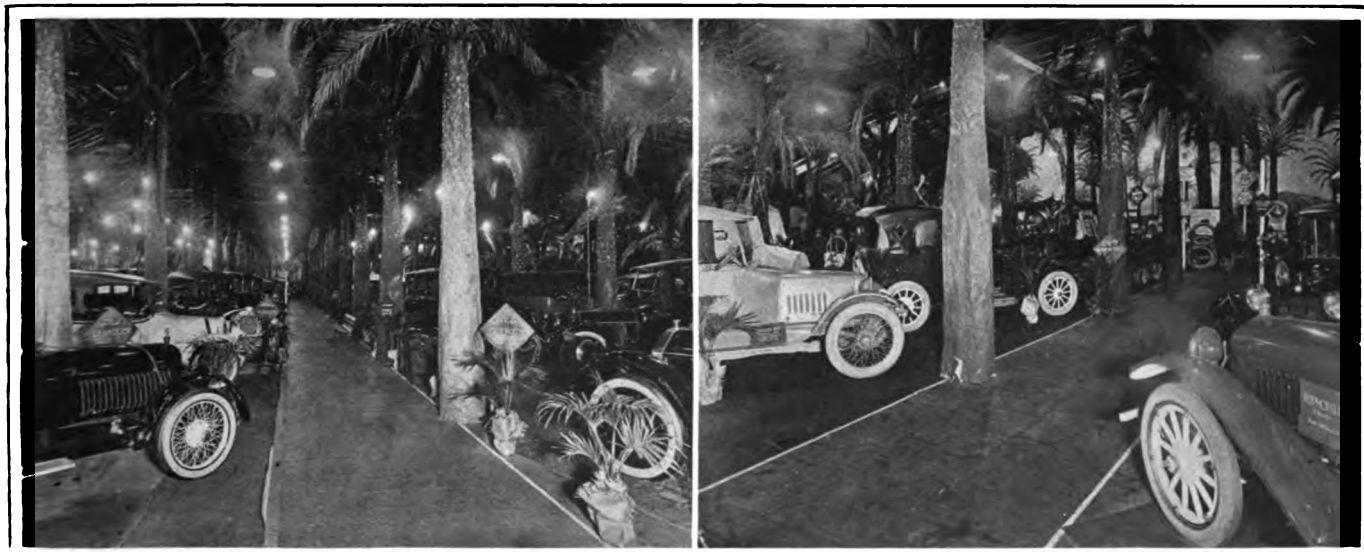
Al Reeves Optimistic as to Industry's Future

In answer to a recent request for an expression of opinion relative to the general condition of affairs in the automobile world, Alfred Reeves, general manager of the National Automobile Chamber of Commerce, said: "Production and sales for the first six months of this year were 18 per cent ahead of the same period last year. The prospects are that this year's production will reach about 2,000,000 passenger cars and trucks. Some of the largest makers are now oversold and cannot meet the tremendous demand of the eager public. Record-breaking crops, unprecedented manufacturing activity, high prices and high wages indicate continuation of large sales. Truck production is 40 per cent larger than last year. The War Department is about to order 15,000 army trucks in addition to several thousand already under contract. Business houses all over the country are now rushing orders for vehicles in order to protect themselves against freight and express embargoes and delays."

May Resume Grand Prize and Vanderbilt

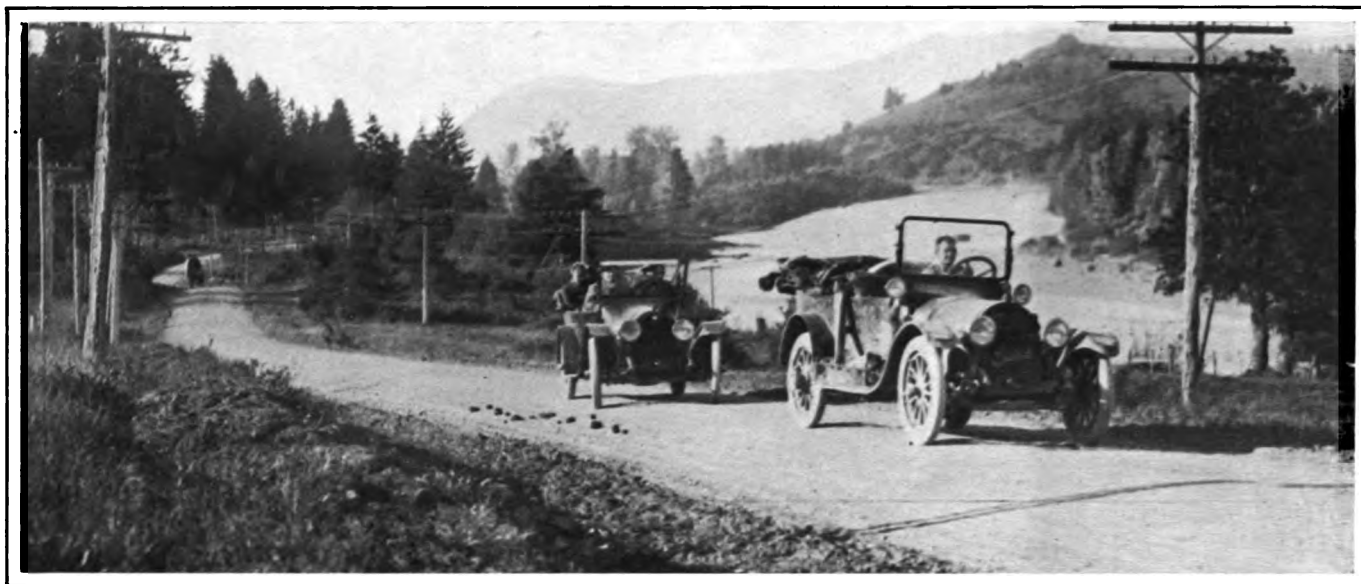
The Grand Prize and Vanderbilt Cup races will be resumed and will be held some time in April, 1918, if the plans of Clarence Bennett of California meet with success. Bennett is seeking a sanction and permission to use the cups from the contest board of the American Automobile Association and the Motor Cups Holding Association. A nine-mile course at San Antonio has been tentatively selected. The Grand Prize and Vanderbilt were abandoned after the two events held at Santa Monica, Cal., late in 1916.

Jules Ellingboe, in a Briscoe racing car, in the championship match race at the Texas State Fair, covered five miles in 4:05, the fastest time ever made in competition on a dirt track. During the five days of racing at the State Fair, Briscoe cars driven by Ellingboe and Cline won eight firsts, eight seconds and seven thirds.



LOOKING DOWN TRANSMISSION ROAD—CHANDLER AND PIERCE-ARROW EXHIBITS.

ON CHASSIS WAY—SAXON, MITCHELL AND HUPMOBILE DISPLAYS.



TYPICAL SCENERY ON THE PACIFIC HIGHWAY, NOT FAR FROM THE CITY OF EUGENE, ORE.

Oregon Has Much to Offer the Touring Motorist

With Some of the Finest Roads in the Country, the Beaver State is Destined to Be the Great Future Playground of the Pleasure-Seeker—Traversed by Mountain Ranges, It Abounds in Scenic Beauties

SEE AMERICA FIRST, and begin by seeing Oregon thoroughly. That, at least, is the advice of one of the best-known motorists of the United States, A. L. Westgard, who has motored over all of the trans-continental highways from the Atlantic to the Pacific and along the Pacific Coast from Canada to Mexico.

Two years ago, when Westgard was scouting out the Northwest Trail, he swung down through Washington, traversed Oregon, via the Pacific Highway, then through the Golden State to Los Angeles, and back East over the Southern route.

This man of many travels, in speaking of the future of the State of Oregon, freely predicted that when Oregon came into her own by a system of modern highways, through the beautiful valleys west of the Cascade Range and across the vast stretches of plateau land and the highland reaches of Eastern Oregon, no state on the Pacific Coast would be more attractive to those in search of nature's beauty than this State whose metropolis is called the "Rose City of America."

In a measure, Oregon and Washington have some similarity. Both have their zones of vast areas semi-arid in character; both have the productive areas between the Cascade Range and the mountain uplift close to the sea; then, too, both have the extremely verdant area closely adjacent to the ocean, where the rainfall, during certain seasons of the year, reaches a total close to the maximum precipitation of the United States.

It is that contrast of regions of dry, moist and wet that produce tremendous opportunities for a variety of scenery that is a revelation to the motorist from the East or South. Those same climatic conditions have produced between the areas of very dry and those of very wet, a fertility of soil in the great valleys between the Cascade and

Coast ranges that makes that section of Oregon one of the richest agricultural sections along the Pacific Coast. Far and wide the Willamette Valley is so acknowledged. Throughout its length from the far south to the beautiful city of Portland, on the north, this great valley is dotted with prosperous homes, wideawake cities and manufacturing plants so active in their production as to astonish visitors from other sections.

Portland, of course, is the metropolis of the State, and is credited with a population of well over 300,000 people. Portland enjoys the reputation of being the healthiest city in America. That at least is the result of statistics, showing that it has the lowest death rate in the United States. It has 334 miles of paved streets, 575 miles of underground sewers, 738 miles of water mains, 195 miles of electric street railway tracks, four inter-urban lines, and is credited with having as many motor cars, population considered, as any city on the Pacific Coast. By a well-known writer, Portland is said to be located between the "Great White Wall" and the "Great Green Wall" of America.

The "Great White Wall" is of course the Cascade Mountains, the high peaks of which bear a covering of eternal snow. The Cascade slopes are painted in seasons by nature's most lavish artist, and its splendid forests lock tree-tops over millions of acres of land. The Coast Range of mountains, the "Great Green Wall" of Oregon, has pine woods that are much talked of in these days of conservation. The western edge of the Coast Range is bathed by the surf of the Pacific Ocean, and the beaches are dotted with numerous delightful hotels and resorts. It is a treasure-trove for the motorist of the Pacific Coast. The combination of mountains and seashore makes this a crowded section of the State when the Summer days along the coast draw vacationists from every other section of

the State, particularly the great interior regions of the east and the dryer valleys of the south.

Portland is 100 miles inland from the Pacific Ocean, but instead of finding that fact a handicap, it is a betterment for shipping. The harbor is a "fresh water harbor," the only one of its kind between Mexico and the Canadian line. When foul-bottomed ships come up the deep channel of the Columbia River, the toredos and barnacles fall away, saving a material expense that must be incurred at other seaports less favorably situated.

Portland takes pride in its claim to be the largest lumber manufacturing and exporting city in the world. Its wheat shipments last year were valued at more than \$17,000,000. That impressive statement is indicative of the wonderfully rich valleys that prevail throughout the State of Oregon. The simplest trip of inspection through this wonderful empire between the Golden State and the great river of the North will at once convince the visitor that the sturdy pioneers who planned and settled the cities of the Willamette Valley could see with prophetic vision the golden era that would result from the toil of their hands and the sweat of their brows.

We have spoken of the Willamette Valley as the great valley of Oregon, but there are other valleys as important, for instance: the Rogue, Umpqua, and others less known but fully as rich. The Willamette, to be sure, is the most important, being 225 miles long by 60 miles in width, with every acre capable of the highest production.

East of the "Great White Wall" of the Cascade is the upland and sage brush country, which the pioneers in imagination peopled with great farms and stock ranches. Earlier by far than those pioneers dared to believe, their dreams of development came true, for now, where only a few years ago the sage brush plains were unbroken, there are productive farms, fruit orchards and stock ranches. From this great interior country water-grade routes led to Portland, and in the early days the river transportation was the only means of travel, for man or products.

The early pioneers foresaw that the railroads would follow the lines of least resistance when they did come, and so they caused Portland to be located at the point where rail transportation would meet water shipping. The early pioneers, too, took note of the climate, mild as that of Virginia, whence most of them came, and these early

settlers also determined that Portland should be a beautiful home city, as well as a commercial giant. They found that the warm winds from the Japan current swept over Western Oregon, the Winters were never cold nor the Summer seasons excessively hot, and they knew that there was the opportunity to capitalize the great outdoors.

Today hundreds and hundreds of miles of rose hedges surround Portland homes and gives to the city the nickname "The Rose City," justifying the judgment of the early builders. On her seven hills, sloping down to the Willamette, Portland is the gem of home cities of America. In Portland roses grow to the same perfection out of doors that they reach in the average hothouse of other cities.

Notwithstanding its beautiful homes, Portland lays claim also to being a manufacturing centre. This feature of the city represents an invested capital of approximately \$40,000,000. From about 1,000 plants there is an output in excess of the entire invested capital annually. These manufacturing properties may be called home factories, as they supply the needs of settlers on Oregon's interior country.

As the hub of motoring in the Northwest, Portland has made herself justly celebrated. To the north, along the Pacific Highway, is Rainier National Park, easily reached by automobile in one day's drive.

To the east is Mt. Hood and its tremendous glaciers, fine hotels and attractive inns. There, too, is the Hood River Valley, famous for its apples, its happy homes and the richest producing acres in the State. To the south of Portland is the Willamette Valley, with its ever-changing green and tropical flowers, where a motor car can be kept busy for a month on side trips. Also to the south, but farther toward the State of California, is Crater Lake, one of the stupendous wonders of the world. Crater Lake is but two days' ride from Portland by motor car over excellent roads.

Imagine if you can a volcano 10,000 feet in height, which through some great cataclysm of nature has had its upper 3,000 feet swept away. One of the best accepted theories is that the great crater of this volcano was caused by a sinking of the crest to fill the great cavities below, which, when the volcano cooled, left a depression 2,000 feet in depth, of which 1,000 feet, during later ages, became filled



SHOWING A SPECIMEN OF SOME NEW WORK RECENTLY DONE ON LOWER COLUMBIA HIGHWAY.



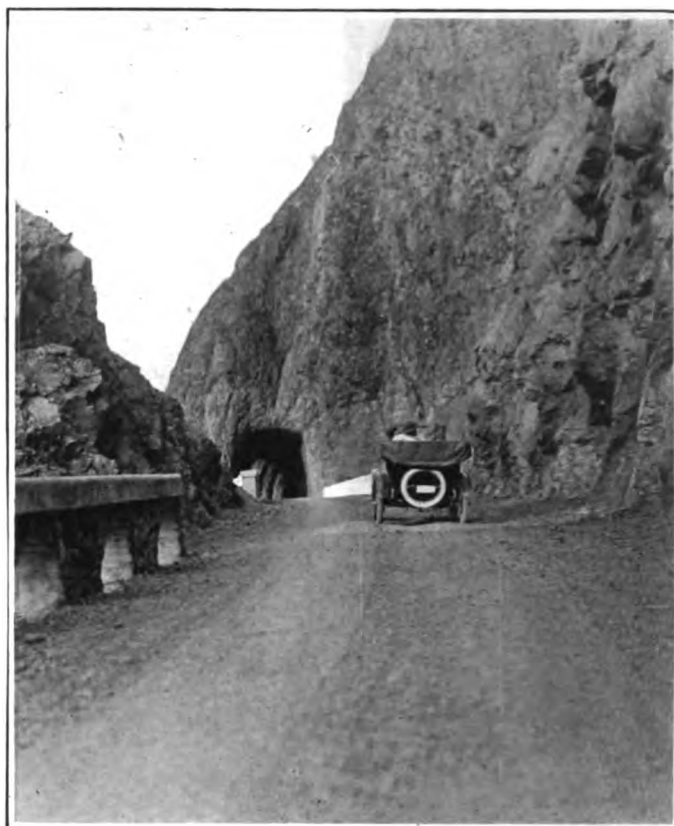
MT. HOOD. FROM UPPER END OF HOOD RIVER VALLEY.

with water, the surface being 1,000 feet below the edge and the walls of which are perpendicular. No man can look into the depths of Crater Lake without standing in awe of its Maker, and after he sees it no human being can describe it.

One cannot lay just claim to having seen all the beauties of Oregon until he has visited and seen the caves of Josephine County. These ancient caves, the most wonderful pieces of nature's handiwork, are situated within the National Forest Reserve of the Siskiyou Mountains. They are 37 miles south of Grant's Pass, from which point they are most easily and conveniently reached. Leaving Grant's Pass, a city of paved and beautifully lighted streets on the banks of the Rogue River, famous for its scenic beauty and fishing, one travels over the best of county roads for 7 miles to Murphys, then on 8 miles to Provolt, and along the highway of William's Creek, for a distance of 11 miles. The end of the automobile road is 27 miles



SCENE AT THE CALIFORNIA-OREGON STATE LINE.



ENTERING MITCHELL'S POINT TUNNEL, COLUMBIA HIGHWAY.

from Grant's Pass, but the grade is so gradual that a motor car can cover the distance in about 1 hour and 30 minutes.

From that point the route is over the Government Trail, through the forest reserve, a wide and well-made path of easy and gradual ascent leading through one of the most picturesque sections imaginable. Giant fir and sugar pines tower above and furnish a shady walk, while wild flowers of many varieties grow in profusion. Reaching the Government Camp at the entrance to the cave, the canyon is 4,300 feet above sea-level.

Entrance is made through a wide opening, out of which flows an underground stream of ice cold and crystal clear water. To the left of the entrance the tourist sees a sign. "Enter Here All Who Will, But Leave Their Fears Behind." That sign would perhaps apply to those experienced in cave explorations, but judging from the wonders that are within, the average tourist may be excused for feeling somewhat timid. Putting on suitable clothing furnished by the Government for underground explorations, the guide conducts the tourists through an underground passage, explaining the wonders of Watson's Grotto, the River Styx, the "Heavenly Boudoir," Petrified Garden, Satan's Back-Bone, the Jewel Casket and the Bottomless Pit. In the latter, rocks dropped continue to strike the sides in their descent until the sound dies out. To reach Adam's Tomb, the tourist descends 200 feet, from which point the Ghost Chamber, 500 feet in length, 80 feet in width and 40 feet in height, together with Paradise Lost, the King's Palace and the Pillar Room, each more wonderfully beautiful than the last, are traversed until the visitor is 1700 feet below the surface of the mountain and nearly a mile from the entrance of the cave.

The actual extent of these caves is unknown; the territory in which they are located being under the National

Monument Act, for their protection and preservation, prohibits the further exploration to determine this point. The entire formation within the caves is of white limestone, of indescribable beauty, stalactites and stalagmites forming pillars and columns, or shapes suggestive of animals.

The pursuit of a wounded bear by a pioneer of 1874 first led to the discovery of these wonderful caves. With the passing of the years their grandeur, beauty and extent have become more widely known, and the Government is now considering the construction of a road which will allow motorists to drive right to the entrance of the caves.

Southern Oregon has numerous mineral springs, lakes and mountain resorts affording the traveler and motorist a wide variety of entertainment, every resort surrounded by the charm of Oregon's out-of-doors, inviting him, luring him to the woods and mountains for fishing, hunting and camping. For those who motor from the south the Pacific Highway over the Siskiyou Range will generally be followed. It is a route of great beauty and grandeur. The roadbed is 24 feet wide, the grade 6 per cent, and with a minimum curve radius of 200 feet all points can be seen at least 300 feet ahead.

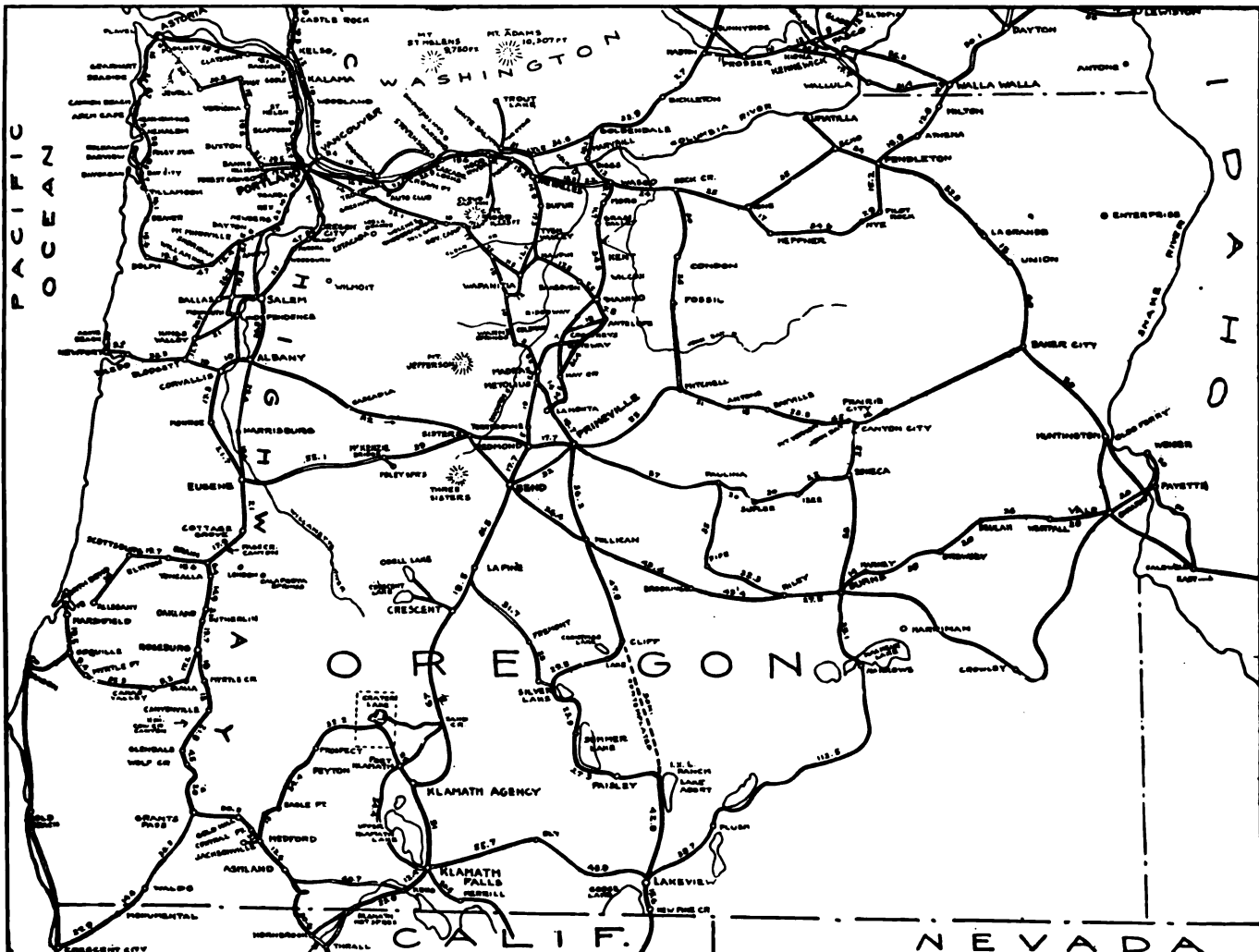
One of the interesting engineering feats of the Pacific Highway just within the State of Oregon, is where the highway passes over the railway, turns three-quarters of a circle and then passes under itself. Tourists pronounce this portion of the Pacific Highway one of the most beautiful and picturesque trips on the Coast. The scenery, combined with the light grades and long easy curves of



SUMMIT OF SISKIYOU, ON THE SISKIYOU HIGHWAY.

the road, make it a trip where the attractive mountain features can be enjoyed by the driver as well as his party without the usual danger and worry so often encountered on the narrow and winding roads of mountainous regions in other states.

From the summit of the range the motorist can see to the south Mt. Shasta, and Shasta Valley in California. To the north the Rogue River Valley in Oregon, surrounded on all sides by forest-covered mountains, some snow-capped—a veritable nature picture, and with a glass on a clear day the motorist can distinguish the snowy rim of Crater Lake, 100 miles distant.



MAP SHOWING MAIN AUTOMOBILE ROADS IN THE STATE OF OREGON, WITH MILEAGE BETWEEN PRINCIPAL TOWNS.

Motor West

LOS ANGELES-SAN FRANCISCO-PORTLAND-SEATTLE

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If This War is to be Won—

WAR has already brought about a shortage of man-power. Perhaps it is not so apparent in this country as it is in those countries that have been in the conflict since the beginning; but as time goes on this dearth of men will become more and more manifest.

If business is to keep pace with the requirements, this scarcity of man-power must be made good to a greater and greater extent, as time goes on, by making use of those instruments which will enable the business man to speed up his business.

As a business quickener there is no single agency which can compare with the automobile.

It enables the farmer to get his eggs, butter and milk to the station, perform short errands to the village, or even go to the distant city when quick repairs are necessary to his farm machinery, with a minimum loss of time and without losing his hold on the managerial reins of the farm.

It enables the huge industrial incorporation to cover its territory with 300 salesmen where 500 or more would be necessary without it.

It enables the merchandising house to thoroughly cover the city with one-half the number of men necessary under the old horse-and-wagon system.

It enables the corner grocer, the butcher, the baker, the milkman, the druggist—every retailer, in fact, of food and other needfuls—to handle his trade with the minimum of men.

It enables the doctor to speed to his patient, and permits of a minimum of physicians taking care of home practice while as many as possible are sent to the front.

It enables the Government's agents, in the manifold duties necessary in purchasing supplies all over the country, to get about from place to place in the shortest possible space of time—even excelling the railroads in this respect.

It enables the business and professional man to store

up "pep" for the day's work as he speeds to his office in the morning, and to recuperate for the morrow as he drives home through the bracing air in the evening.

In fact, every industry, every profession has felt the beneficial impulse which has followed upon the use of the automobile. It is the greatest substitute for man-power ever devised.

And yet—

There are those in Washington who class the automobile as a luxury and a non-essential. In the same class, mind you, as art goods, candy, cosmetics, neckwear, pianos, and shoe polish.

As a luxury and a non-essential the law-makers put a 3 per cent manufacturer's tax on the automobile, forbade its being carried in open-top freight cars, and are thinking of stopping shipments of steel to the factories where it is built.

Such short-sightedness is almost unbelievable. It can only be due to a lack of a proper appreciation of the facts by the legislators at the national capital, many of whom are evidently still of the opinion that this great conservator of man-power and of time is still a "rich man's plaything."

Why, if the operation of every passenger car in the country were tomorrow prohibited by Government order, business generally would slow down to a veritable walk—just at the time when it is absolutely essential that it should be speeded up to the utmost.

Time was, a decade ago, when passenger automobiles might properly be termed "pleasure cars"; but that is no longer so. The fact that a passenger car may be used for purely pleasure purposes should not be allowed to becloud the fact that it is an essential in the rapid trans-action of present-day business.

Motor trucks have been, and will be, used for pleasure purposes at times; but no sane man, even though he be a legislator, would think for a moment of prohibiting the building of more trucks. And that is what the limitation of the supply of steel to car manufacturers means.

It will be an untold blessing to American business if, instead of placing obstacles in the way of automobile manufacturers, our legislators at Washington should do everything in their power to foster the industry; even to the extent, if necessary, to increase the output, of subsidizing all the factories.

If it is necessary to conserve the steel supply of the country in order to win the war, there are quite a number of other industries using steel which might much more reasonably be restricted in the matter of supplies than the automobile industry.

Judged by the standard, "Will it help win the war?" the unrestricted output of automobiles will do more to bring about that much-to-be-desired end than any one thing we can think of.

Helping to Win the War!

A NUMBER of companies on the Pacific Coast whose annual custom it has been to distribute engraved Christmas and New Year cards, have decided not to do so this year, but instead to contribute the money to the Red Cross or other relief organizations where it will do real service.

This idea will doubtless meet with support from almost every quarter. Many corporations and thousands of individuals throughout the country are now planning their

form of greeting, and "Motor West" suggests to its readers that by the abandonment of this custom hundreds of thousands of dollars can be diverted into relief channels, where so much money is needed at this time.

The supply of labor in all parts of the country is wholly inadequate for necessary, important and productive enterprises, and the successful outcome of this movement would release labor from non-productive and consuming enterprises which would be diverted into productive lines.

Elgin Scout Car Still on Its Travels

Roy S. Marsh, the scout master in charge of the Elgin Six National All Trails Scout Car, altered his plans of starting from Chicago to St. Louis to continue his eastward trip over the National Old Trails Road to Washington, thence to New York, and back to Chicago over the Lincoln Highway. Mr. Marsh accompanied by Dr. Merle Tuttle, of Chicago, decided to take no chances with the winter weather and to make the portion of the Dixie route from Chicago to Mackinaw City and to Detroit prior to snow-fall. Upon its completion they will continue the 12,000-mile journey, including the round trip over the Dixie Highway from Chicago to Miami and return.

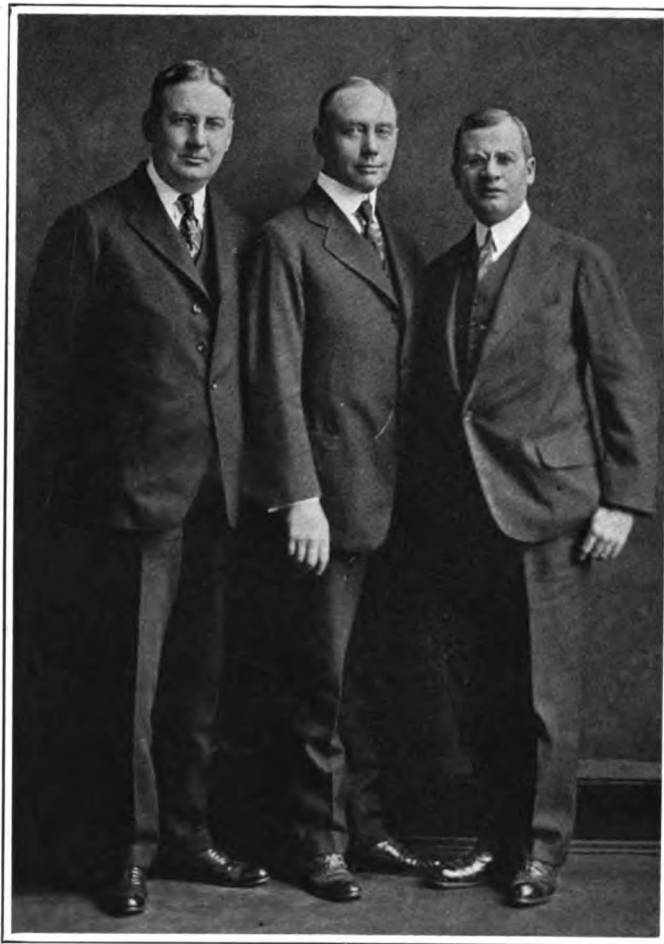
Commendation of the reports of Scout Master Marsh covering the Lincoln Highway from Chicago to San Francisco, and the National Old Trails road from Los Angeles to St. Louis have been given by several score automobile clubs throughout the United States, and by the several national associations represented. These reports have been supplied by request to Secretary Newton D. Baker, of the War Department, and on its arrival at Washington Scout Master Marsh will make his personal report to the secretary.

The seals on the Elgin were broken at Chicago after 6,129 miles, a record sealed-bonnet run, and the car will make no effort to add to the laurels won, awaiting the breaking of this record. No alterations of any sort were made in the Elgin at Chicago, where it received a thorough overhauling after its more than arduous experiences in the western country. Dr. Tuttle, now driving the Scout Car, was appointed when Edwin M. Lawrence, driver on the western trip, was taken ill after the return to Chicago.

Industry Now Co-Operating with the Government

Active co-operation of the automobile industry with the Government is now an actuality. Chairman A. W. Copland, of the Automobile Industries Committee, recently pledged the men, material and equipment of 550 automobile plants and 1080 parts and accessory makers to the war needs. So much of the vast production facilities of the automobile industry as may be needed by the Government will be devoted to war work, for which its vast manufacturing capabilities are so well adapted.

A large number of automobile manufacturers here, in response to the call for their services in co-operation with the new committee, are keen to produce munitions in addition to their regular lines of automobiles which all manufacturers will continue to build to an amount depending on market conditions. There is certain to be some reduction in the number of passenger cars produced, based on Government requirements and with a view to creating the least hardship on more than 27,000 retail dealers of automobiles, who maintain sales establishments



MEMBERS OF THE AUTOMOBILE INDUSTRIES COMMITTEE.
(LEFT TO RIGHT) JOHN R. LEE, A. W. COPLAND (CHAIRMAN),
HUGH CHALMERS.

and garages in almost every village and town in the country.

The Automobile Industries Committee has opened headquarters in Washington and has begun work on plans for complete co-operation with the Government. There is hardly a thing of metal, wood, rubber, or cloth needed in the war that cannot, within a reasonable time and with proper readjusting of factories, be made by the automobile men, and thus keep their giant plants and labor operating at top speed and to the highest point of efficiency.

The other members of the committee with Mr. Copland are Hugh Chalmers and John R. Lee.

Calendar of Coming Events

January 5-12, 1918—New York National Show.
January 26-February 2—Chicago National Show.
February 6-13—Portland, Ore., Show.
February 9-16—Kansas City, Mo., Show.
February 11-16—St. Louis, Mo., Show.
February 16-26—Annual San Francisco Show, Geo. A. Wahlgreen, manager.
February 18-23—Des Moines, Iowa, Show.
February 23-March 2—Omaha, Neb., Show.
March 2-9—Boston Show.
March 19-24—San Francisco Motor Truck Show
April 9-13—Stockton, Cal., Show.



The Motor Truck in the Camps

Enters Into Many Angles of Training and Makes the Life of the Soldier Much More Pleasant

AFTER breaking all records for rapid transportation of materials used in the construction of the national cantonments, motor truck companies in the service of the U. S. army are now being trained for the more serious angles of the war with which they will be brought face to face when they are sent to the front.

A large part of the time so far devoted to special maneuvers has consisted of experiments in mobile camouflaging. With enemy airmen concentrating their attacks on attempts to drop bombs on fleets of trucks on their way to the front, the hiding of the fleets from the air hawks' view by artificial means practically insures the regular delivery of large consignments of food, ammunition, clothing and supplies to the men in the trenches.

The men in charge of the camouflaging experiments are

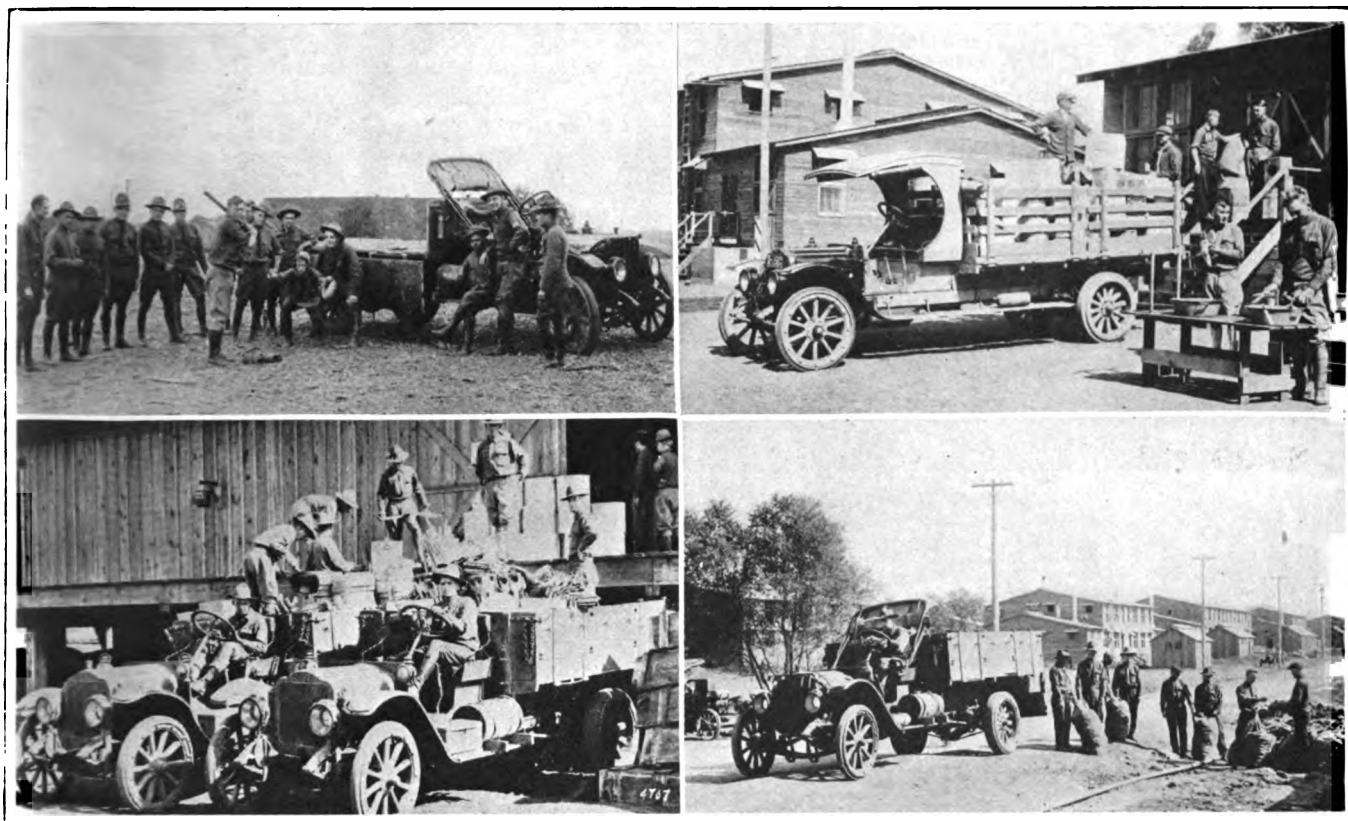
all seasoned experts in their particular lines of business and merely attached to the motor truck divisions for highly specialized work. The staff is composed of interior decorators, artists, photographers, sign painters, designers, landscape artists, engineers, architects and others who have made a success in professions of this nature.

Probably the greatest success in this work has been achieved by Captain K. G. Martin in command of U. S. Truck Company No. 57, which is stationed at Camp Dodge, Iowa. This train consists of thirty three White 2-ton trucks which saw 40,000 miles of service in Mexico. When the trucks were not being used for construction work the camouflaging experts have covered them with branches of trees and foliage to make them invisible even at a short distance; paint and canvas have been used freely in designing false tops to make them blend into the general landscape; smoke screens have been experimented with and numerous other measures tested with satisfactory results.

Other maneuvers of the truck companies have consisted of tests for the rapid transportation of troops. It was found that an entire company of soldiers could be loaded from the ground with rifles and equipment in fifteen seconds. Experiments have also been made in field man-



SOME ACTIVITIES OF THE WHITE TRUCKS IN CAMP—(Upper left) "Prisoners" unloading garbage. (Lower left) Bringing in the mail. (Upper right) Box lunches for the men at noon. (Lower Right) Carries the music for informal fox-trots.



(Upper left) Utilized as back-stop in the daily ball game. (Lower left) Bringing in supplies for the camp. (Upper right) Delivering groceries to the barracks kitchen. (Lower right) Delivers 1,000,000 pounds of spuds every 30 days.

euvers and trains of trucks run in sections, each section loaded with men detailed for special duty such as the laying of signal lines, the placing of explosive charges and the guarding of approaches. In every instance, Captain Martin says, the rapid transportation provided by the trucks proved efficient and satisfactory.

When Captain Martin and his company arrived at Camp Dodge from the U. S. Motor Storage Detachment at Fort Bliss the place was nothing more than a typical Iowa cornfield. There was not a single finished building in the camp and for several nights the company used the trucks as barracks. During the next two months the trucks worked 12 to 14 hours a day delivering building materials, machinery, tools and supplies necessary to the construction of the new wooden city. In this work they registered a total mileage of over 225,000 miles.

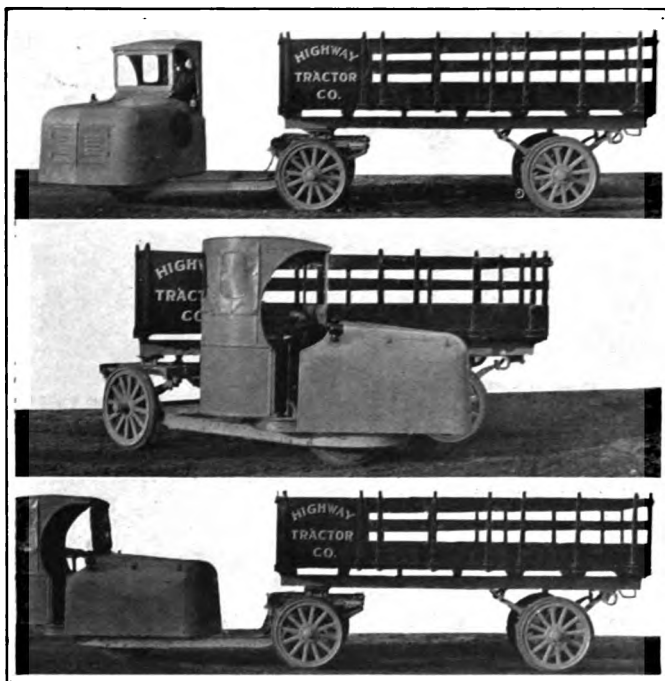
Probably the best example of the magnitude of the work in the building of a cantonment and the efficiency of motor trucks in transporting materials is found at Camp Funston, Kan. This is the largest camp in America and has accommodations for 60,000 men. Three thousand freight car loads were received and unloaded at 11 big warehouses in 60 days, an average of 50 cars a day. Five hundred workmen were engaged in removing the materials from the cars and transferring them to U. S. Truck Companies No. 46 and 59. The heroic work on the part of the factories in turning out the materials and the railroads in rushing the freight cars to the sidings in the camp was more than matched by the efficiency of the trucks in delivering the materials to the different buildings in the 31½ square miles of military reservation. Over 4000 buildings were under construction at the same time and materials had to be hauled in sufficient quantities to keep 10,000 carpenters and workmen busy.

Everything from the boxes of toothpicks for the mess tables to concrete mixers, electrical machinery, water mains, boilers, bakery and laundry equipment were hauled by the trucks in record time. Forty-two additional trucks of three and five tons capacity were rushed from the White factory in Cleveland to transport the heavy loads.

The hauling of 27,000,000 feet of lumber in three months time was one of the notable achievements. Almost every day several of the machines made trips to Manhattan, Junction City, Topeka and other points 20 to 60 miles distant for the purpose of bringing to the camp some much-needed materials or to unload stalled freight cars in order that there might be no delay in the progress of the work. Frequently these trips were made at night.

Government engineers from the Office of Public Works in Washington are supervising the building of 21 miles of new military roads through the reservation. The main highways are to be built of bituminous macadam and the secondary roads through the regimental units are to be water-bound macadam with a hot oil treatment. A White Good Roads Truck hauled, dumped, spread and rolled thousands of tons of rock used in the construction of the roads. A White distributor equipped with a 1,000-gallon tank, spread the hot tar and asphalt materials over the road surface under a penetrating pressure.

As might be expected the fire hazard in the city of 4,000 wooden buildings is very great and every precaution has been taken to guard against this enemy. Three days after a White combination chemical hose and wagon was installed it extinguished a healthy blaze in the center of the spacious lumber yards which for a time threatened to destroy the entire camp. This experience caused officials to purchase another unit of White fire apparatus. It is a truck equipped with a high efficiency pump.



SHOWING SOME OF THE HAULING AND SHORT-TURNING STUNTS OF WHICH THE NEW TRUCKTOR IS CAPABLE.

The Trucktor Pulls Its Load

3 to 5-Ton Tractor Is a Three-Wheeler, With Short Turning Radius, for Congested Traffic

THE Highway Tractor Co., Indianapolis, will shortly place on the market a new 3-to-5-ton tractor. This machine has been appropriately named the Trucktor. While the construction of the Trucktor departs somewhat from the conventional type it carries out the time-worn principles of pulling a load rather than carrying it.

This machine is the result of some twenty months of study and experimenting by the engineers of the company, several of their machines having been in active service for more than a year.

The company is composed of and officered by men of long experience in the motor vehicle industry, and their one aim has been to place upon the market a hauling tractor with maximum capacity of 5-ton loads, at the same time giving the public a perfected machine which would stand up in actual service. Charles G. McCutchen is president of the company; Carl G. Fisher, vice-president; James A. Allison, treasurer; Henry F. Campbell, secretary.

The Trucktor is a 3-wheel machine capable of turning alone, or with its trailer, in a remarkably short space. It drives and steers from the front wheel, the power plant and driver's cab, with its controls, being so mounted that the machine can be reversed facing the trailer and pushing it, should it be necessary to back for any great distance. It can also, of course, back in the usual way. The turning mechanism and fifth wheel arrangement on the Trucktor makes for very easy handling in traffic or in close or congested places around depots or warehouses.

The motor is a 34x5 inch four-cylinder truck Continental. It is cooled by cellular type radiator, and water

circulation is by pump. The ignition is by high-tension magneto. The main driving wheel is mounted on a 34x8 solid rubber tire, while the rear wheels are 36x4, also solid rubber. The transmission is a two-speed gear-set of special design, having extra large face gears. The clutch is Borg & Beck 10-inch. The drive from the countershaft is a roller type chain, while the final drive is an internal gear thoroughly enclosed from dust.

The semi-trailer is attached to the Trucktor by a ball and socket type fifth wheel, and is so arranged that it can be readily connected or disconnected in a few moments. This fifth-wheel arrangement is such that it can be readily adapted to any conventional type of horse-drawn vehicle or semi-trailer. For heavy loads the company advises a rubber tire semi-trailer of ample tire size.

The price of the Trucktor complete including all attachments for connecting semi-trailer, is \$1,750 f.o.b. Indianapolis.

Maxwell One-Tonner Creates Economy Record

Seventeen and eight-tenths miles on one gallon of gasoline was the recent remarkable performance of a Maxwell one-ton truck with a capacity load. So far as shown by available data this performance is believed to be a world's record. Two outstanding features of this test were the facts that the driver had never before driven a truck, and the road used did not allow of any coasting to increase the mileage. An average speed of about 15 miles was maintained.

Before making the run the truck was loaded with a Maxwell touring car weighing 1,970 pounds. The gross weight of truck and load was 5,525 pounds, including driver and three observers. A stock Maxwell truck was used, with one of the famous Maxwell one-gallon red tanks attached.

When the truck came to a stop the speedometer registered 17.8 miles. Just one little mischance had prevented the truck from making more than 18 miles on the test. The driver was not familiar with the roads and unfortunately drove into a blind street. In order to turn around in the extremely narrow roadway he found it necessary to jockey back and forth, which lowered the mileage.

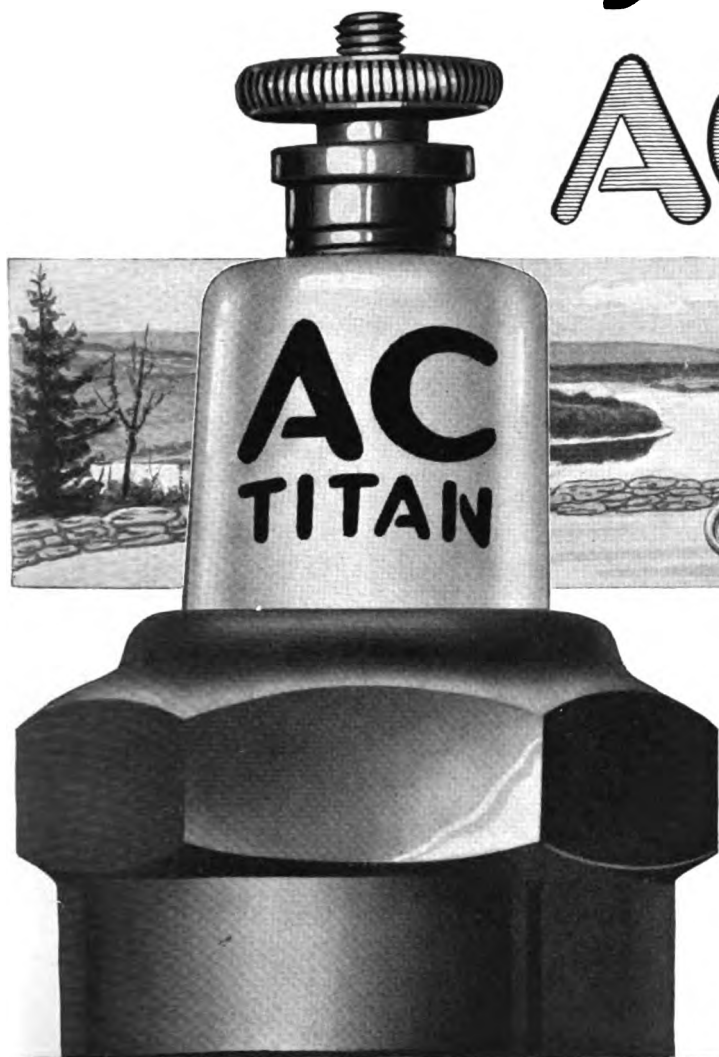


WHERE REPUBLIC TRUCK GOT SOMEBODY'S GOAT.

Here you see a Republic Truck with trailer that has gone out to get somebody's goat—and got it. So successful was the Republic as a goat-getter that 362 goats were rounded up before the truck headed for the place where good goats go. They are on their way from Sonora to San Angelo, Tex., for shipment to market. The haul of 73 miles between these two points was made by the truck and trailer. This load illustrates how motor trucks are playing an increasingly important part in long hauls to market. The Republic Motor Truck Co., of Alma, Mich., is delivering thousands of trucks to grain farmers, dairy farmers, cattle growers, fruit growers and market gardeners this year.

Only Hitting On Three ? Ford Owners Avoid This When They Equip With-

AC SPARK PLUGS



THE Roll of Honor below contains the names of the most efficient and expensive cars built. Every part of these cars is necessarily the best.

They use **AC Spark Plugs** as standard equipment. Such testimony **means** something; and the man who owns a Ford should get the same advantage—the **best** in Spark Plug service. There is a special **AC** made for Ford cars. Equip now. Give your car a chance to do itself full justice.

DEALERS—Our arguments are **references**, not claims. Read the list of manufacturers. Then stock up with **AC** and cash in on their endorsement.

CHAMPION IGNITION COMPANY
Sole Manufacturers, Flint, Michigan

List of Manufacturers Equipping With **AC**

The Standard Spark Plug of America

Cadillac	Buick	Dort	Lexington-Howard	Delco-Light	Signal Trucks	Federal Trucks
Pierce-Arrow	Oakland	Cole	Case	Murray	Maxim Trucks	G. M. C. Trucks
Packard	Oldsmobile	Reo	Scripps-Booth	Economy	Acme Trucks	American-La France
Marmon	Nash	Paige	Crane-Simplex	Jordan	Riker Trucks	Old Reliable Trucks
Hudson	Kissel Kar	Peerless	Stearns-Knight	Liberty	Wilcox Trux	Gramm-Bernstein Trucks
Chalmers	Premier	Pilot	Titan Trucks	Jackson	Republic Trucks	Menominee Trucks
Hupmobile	Knox	McFarlan	Saxon	Apperson	Case Tractors	Brockway Trucks
Chandler	Abbott	Paterson	Stutz	Anderson	Four Wheel	Wisconsin Trucks
Haynes	Pathfinder		National	Phianna	Drive	Moreland Trucks
Chevrolet	White	Davis	Velie	McLaughlin	Netco Trucks	Sandow Trucks
Locomobile	Daniels	Monroe	Stephens	(Canada)	Sterling Trucks	Samson Tractors
Disbrow	Westcott	Singer	Dodge Bros.	Gabriel Trucks	Diamond T	Robinson Fire Trucks
Dorris	Duesenberg	Hatfield	Henderson Bros		Trucks	Stewart Trucks



ARMY KITCHEN MOUNTED ON OVERLAND COMMERCIAL CHASSIS.

Motor-Driven Kitchen Insures Hot Meals for "Sammies"

The Buzzacott Army Kitchen, mounted on an Overland commercial chassis, was recently submitted for inspection by the Federal authorities in Washington.

Among the many new features of the motor kitchen are the following: Two 20-gallon soup and coffee boilers; four 10-gallon reserve hot food retainer vessels; two large ovens for roasting and baking purposes; pans for frying, and a complete set of cook's tools essential for work in the field.

In addition to the above, space is provided for extra fuel and rations, sufficient for one complete food renewal. The cooking capacity of the motor kitchen is 250 meals at one time and it can be operated equally well on the march, when traveling 10 to 20 miles an hour, as when it is at a standstill.

The mobile advantages of the motor kitchen are far superior to horse or mule-drawn rolling kitchens, inasmuch as during a campaign, water, fuel and rations can be gathered by the kitchen itself while en route. The motor kitchen also can deliver the food hot, direct to the trenches, which is an invaluable feature, because it releases army trucks which were hitherto the only available vehicles for such duty. The kitchen can be removed by unscrewing four bolts and placed on the ground, and the chassis utilized for many other purposes about the camp. The amount of fuel required for each meal for 250 men is 18 pounds of wood or 12 pounds of soft coal.

1918 "Motor Trucks of America" Ready Jan. 1st

Announcement is made that the 1918 edition of "Motor Trucks of America," of which S. V. Norton, manager of truck tire sales of the B. F. Goodrich Rubber Co., is the author, will be ready for distribution on Jan. 1st. The book, consisting of 200 pages of reading matter, illustrations and specifications, is the sixth to be issued in as many years.

Complete specifications of nearly 150 of the leading gas and electric-driven motor trucks are contained in the volume. In fact, there are thirty-one specifications for each model. These details are absolutely dependable, as the

approval of each truck manufacturer is obtained before specifications of his model are inserted.

The illustrations picture the very latest models and furnish the man in the market for a truck, or the manufacturers themselves, for that matter, suggestions for special bodies for any particular line of work.

Great interest has always been aroused by the introductory articles by Mr. Norton. His previous papers on "Lengthening the Life of the Motor Truck," "Devices That Make for Motor Truck Efficiency" and "Fundamental Questions Involved in Changing From Horse to Motor Delivery" have been so much in demand that frequent reprints have been necessary to take care of requests for extra copies. Many abuses to motor trucks, so manufacturers say, have been eliminated through information thus given by Mr. Norton.

Duplex Truck Co. Saves Rail Freight Charges

The Duplex Truck Co., Lansing, Mich., is giving a practical demonstration of the economy of using motor trucks for overland haulage purposes. The new Duplex factory in Lansing is nearing completion, and the machinery in the Charlotte factory is being hauled overland to Lansing—a distance of 20 miles—with Duplex trucks. H. M. Lee, president and general manager of the Duplex Truck Co., says that the trucks are saving time and money—and that it is necessary to handle the machinery but twice instead of four times as would be the case if railroads were transporting the machinery.

President Lee says that all machinery will be installed in the Lansing factory by December 1 and production of trucks will be increased to 300 a month. About 400 workmen will be employed in the Lansing factory when manufacturing operations are started.

Stegeman Motor Car Company Being Reorganized

There is in progress at the present time a complete reorganization of the Stegeman Motor Car Co., makers of the Stegeman truck at Milwaukee, Wis. Oscar Stegeman has resigned as president and general manager, his place being taken by Adam J. Mayer, treasurer of the Mayer Boot & Shoe Co.; Lynn S. Pease, a well-known expert on industrial organization, has succeeded L. G. Schertl as secretary-treasurer, while E. M. McLean, formerly of the Four-Wheel Drive Auto Co., of Clintonville, Wis., and later of the Armleder Co., of Cincinnati, is sales manager. The new organization will continue to manufacture six-cylinder trucks, but will confine the line to 2-, 3½-, and 5-ton capacities, eliminating the 3-, 4-, and 7-ton sizes.

Truck Attachment Makers Effect Combination

Joseph A. Anglada, consulting engineer for several organizations, is authority for the statement that the Commercial Car Units Co., a Philadelphia organization which manufactures the Truxton unit for Ford cars, and the Redden Motor Truck Co., have formed a combination pooling the Cook, Lacoine and Scott patents. The organization has \$1,000,000 capital. The Redden truck-maker will continue for the present to be made in Jackson, and the Commercial Car Unit Co. will continue its manufacturing in Philadelphia.

Vera, Wash.—H. L. Hanson has bought the Inter-State Auto Co.

Selden Trucks

Buy a Motor Truck Now

Conserve the man power of the nation. A serious labor shortage must come. One man with a motor truck can do the work of three or four with a slow, costly horse-drawn vehicle.

Conserve the freight cars. The government needs them now. And the rapidly increasing business of the nation is greater than the railroads and express companies can properly handle. This means delayed deliveries and dissatisfied customers.

The time has come when business men who would progress must make preparations for the transportation of their own merchandise. And the installation of a dependable motor truck is the logical solution of the problem.

Thousands of business concerns know the economy of Selden Trucks—for they are profiting daily by their use. The testimony of a long list of well satisfied Selden users substantiates this

fact. Selden Trucks are big and powerful in construction—heavier and stronger than other trucks of the same rated capacity and made from better materials. They never fail to haul the load without interruption, with low consumption of gasoline and oil, and at an exceedingly low cost of upkeep.

Buy a Selden Truck now while you can get an immediate delivery. Don't wait until the factory is oversold or freight car shortage prevents prompt delivery. "Buy a SELDEN—it's ALL Truck." Write for full information on the model best adapted to your business.

Light Delivery, 1, 2, 3½ and 5-Ton Worm and Internal Drive.
Write for complete information on the model that will effect economies in your business.

RALPH HAMLIN

Distributor

1040-1044 So. FLOWER ST.
LOS ANGELES

Selden Truck Sales Company

Rochester, N. Y., U. S. A.

E. E. GERLINGER

Pacific Coast Division Mgr.

GERLINGER BLDG.
PORTLAND, OREGON



Mention "Motor West," Please, When Writing to the Advertiser

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THE BARESKIN OVERCOAT WORN BY THE HERMIT OF PALM CANYON IS DONNED ONLY ON THE COLDEST DAYS.

Palm Canyon—A Hermit's Paradise

Hermits, who voluntarily relinquish their share in the benefits and comforts of civilization, are wise when they select a pleasant climate like that of Southern California in which to pursue their solitary way.

One spot over in Riverside County, seems particularly designed by nature to harbor such recluses from society. The air is perennially soft and warm, even at night; a sparkling pool of clear cold water is almost surrounded by a clump of palms, and the encircling hills form a natural barrier against wind and storms.

This "Hermit Haven" (not so well known as it deserves to be) is Palm Canyon, reached by motor car through Beaumont, Banning and Palm Springs—and the palms that give it its name are the only California "Native Sons" in the palm family. These alone grow naturally in Southern California—all the other palm trees found in that section have been brought from elsewhere.

The hermit in question is one of the unique characters of a region abounding in queer types. He went to live in picturesque Palm Canyon a good many years ago, when his broken health demanded an out-door life.

Anyone who sees him now will need no other testimony as to the physical benefits of life in this favored vale. He finds the air so warm and the sunshine so pleasant that he has almost entirely discarded clothing, and his diet is also on a "near-to-nature" basis. Hoover would decorate him with innumerable medals if he wore a coat on which to pin them, for his week consists of seven meatless days. Fruits, nuts and vegetables furnish his food, and a more

active and physically striking example of the virtues of vegetarianism is rarely seen.

Although the visitor in its quiet depths might imagine himself hundreds of miles away from civilization, as a matter of fact Palm Canyon is quite accessible over a plainly-marked, well-made road; the route being fully described in the "Book of Southern California Tours" issued by The Goodrich Touring Bureau. The only part of the trip which does not provide good automobile roads is the three-miles from Palm Springs into the canyon. This stretch is very rough, but a party of eastern visitors who recently covered the ground in an Overland Big Four, Goodrich-tired, found it easily negotiable. They were certain that the unique and interesting features of Palm Canyon scenery are well worth the journey. The return to Los Angeles can be made over the new Jack Rabbit Trail from Beaumont to Riverside, one of the finest mountain highways both in construction and scenery to be found in America.

Hearne, In Roamer, Captures Liberty Sweepstakes

Eddie Hearne, driver of a converted Roamer car, won the 50-mile Liberty Sweepstakes race at Ascot Park, Los Angeles, Thanksgiving Day. Outside of the fact that such nationally famous drivers as Louis Chevrolet, Eddie Hearne, Tom Milton and Cliff Durant was the principal reason for the attendance of some 15,000 persons, the Ascot meet was peculiarly interesting in that it will probably be the last automobile race held in the United States for the duration of the war.

Hearne was compelled to average 71.5 miles per hour in order to emerge ahead of the closely pursuing Duesenberg, containing Milton. Milton at the finish was only about two-tenths of a minute behind. Out of the six contenders Milton supplied the majority of the thrilling moments that made the Ascot event a vigorously contested race. At the right curve one of his tires exploded and the car swerved viciously toward the fence, but the driver managed to bring it back under control and continue in the race as a dangerous contender. Hearne leaped into the lead at the start and Chevrolet and Durant ran in second and third places. Before the twentieth lap was past Delno's Stutz had gone out with a stuck piston. In the 22nd lap Milton led Chevrolet and soon after passed Hearne, driving at a speed surpassing all others made during the race. Hearne soon pushed back Milton into the role of an uncomfortably close pursuer and finished in first position. Tire changes were numerous, considering the distance of the race.

Preparing the spectators for the main event, Barney Oldfield circled the course in 45 seconds in his so-called "golden submarine" car, bettering his old front-drive Christie record by about a fifth of a second. The 10-mile handicap race was won by Chevrolet's Frontenac in a time of 7 minutes, 51 seconds, an average of 76 miles per hour. Milton probably achieved the highest average for a race when he won the one-mile "Gobbler Invitational," driving at 76.6 miles per hour. A. H. Patterson was unable to enter his Hudson owing to the refusal of the railroads to carry a racing car at this time.

Santa Barbara, Cal., will stage an automobile race, Dec. 2, for the benefit of the militia stationed there. The Milac car, a Los Angeles product, will probably be entered, in addition to a Maxwell driven by Campbell and a Ford driven by Monte Huyck.

RACINE

Country Road & Multi-Mile Cord

TIRES

Quality and National Advertising

SUCCESS!

Now *national advertising* in The Saturday Evening Post, The Country Gentleman, and other publications, brings even greater success for the dealers who sell *Racine Country Road* and *Multi-Mile Cord* Tires.

Without a line of national advertising, dealers handling *Racine Rubber Company* quality tires—the *Country Road*; the *Multi-Mile Cord*—have always made money by being able to offer proved quality to the automobilists in their trade areas.

And now—with *Racine Country Road* and *Multi-Mile Cord* Tires backed by a really big campaign in The Saturday Evening Post—The Country Gentleman—in leading farm papers—no wonder dealers are quick to tie up with this exceptional opportunity for profit.



National Advertising with Real Sales Strength

A Triumph for dealers selling
RACINE Country Road and Multi-Mile Cord Tires



RACINE RUBBER COMPANY
Racine, Wis.

Please furnish through the nearest *Racine Rubber Company* distributor, details of the *Racine Country Road* and *Multi-Mile Cord Tire* opportunity, with the understanding that I am in no way obligating myself.

Name

Address

City State

(12)

How About Your Tire Profits?

Are you content to let this unusual money-making opportunity slip by without investigating it? Are you satisfied you are making the money you should?

Racine Rubber Company's national advertising strikes a new note in tire advertising—gives real proof of extra quality and extra service in *Racine Country Road* and *Multi-Mile Cord Tires*.

Dealers selling *Racine Country Road* and *Multi-Mile Cord Tires* are the most prosperous tire dealers everywhere. Now—national advertising brings them even greater profit.

Distributors at Convenient Points

Racine Rubber Company distributors—all top-notch tire men—are conveniently located at all principal distributing points. They are equipped to give you prompt deliveries and efficient co-operation.

Dealers are rapidly making their connections. Are you going to wait longer—and then regret it?

A connection with *Racine Rubber Company*, through a *Racine Rubber Company* distributor, is worth thousands of dollars. Use the coupon to get details. Mail it today.

Racine Rubber Company
Dept. 12 Racine, Wis.

Send Coupon at Once!

Created for Quality

Quality of the highest is the ideal behind Hood Tires. To make a tire that will give the greatest possible service to the user.

To accomplish this, only the finest materials obtainable are used—the most skilled workmanship—the most scientific and exacting care and the maintenance of the highest standards.

No better tire can be built than the Hood Tire. Naturally you get a wonderful mileage record, an increased life, a remarkable durability and an insurance against blowouts and skidding.

True dollars and cents economy that is self-evident to every user of Hood Tires, is of course, the outcome of this superlative quality.

Look for the sign of the Hood Dealer; write us direct if you cannot locate him.

HOOD TIRE CO., Inc.

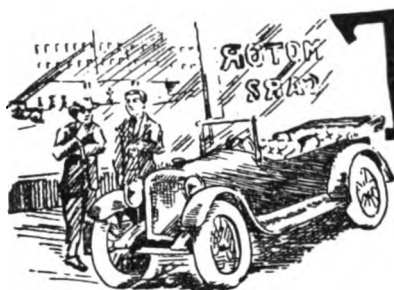
Factory Branch: 1223 So. Olive St., Los Angeles, California

Main Office: Watertown, Mass.



Quality is Economy

THIS IS THE SIGN OF A HOOD DEALER



Trade Briefs and Factory Gossip

Edgar Apperson General Manager.

Edgar Apperson, who for 25 years has been associated with his brother, Elmer Apperson, in the manufacture of Apperson "Jack Rabbitt" motor cars, has just been elevated to the general management of the company. A



EDGAR APPERSON,
General Manager Apperson Bros. Automobile
Co., Kokomo, Ind.

quarter of a century ago the Apperson brothers built together the first practical passenger motor car. Together they have evolved more improvements on the motor and on the passenger automobile than probably any single or two men in the industry. It was but logical therefore, that when Elmer Apperson wished to retire from active management of the company, that Edgar Apperson should step into the place.

Wire Wheel Corp. Licenses Dayton.

The Wire Wheel Corp. of America has licensed the Dayton Wire Wheel Co. of Dayton, O., as a manufacturer of wire wheels under its patents. The Dayton company makes wire wheels for Ford cars, motorcycles and airplanes. It is the third licensee under Wire Wheel Corp. patents, the other two being the Standard Roller Bearing Co. and the Hayes Wheel Co.

Cummings Joins Timken Roller.

Arthur H. Cummings has been appointed advertising manager of the Timken Roller Bearing Co., Canton, O. He recently resigned from assistant advertising manager for the B. F. Goodrich Rubber Co., Akron, O.

Russel Axle Increases Capital.

The Russel Motor Axle Co., Detroit, has increased its capitalization from \$600,000 to \$750,000. The company has just completed a one-story addition to its plant which gives additional floor space of 26,000 square feet. Fifty thousand dollars worth of new machinery has just been purchased which will enable the company to increase its production 60 per cent during its next fiscal year over what it has been during the year just closing.

* * *

Chevrolet to Add to Plant.

Announcement is made that the Chevrolet Motor Co. will soon begin construction work on a new \$100,000 factory building and a \$30,000 addition.

* * *

Conlon Acason Asst. Sales Manager.

H. A. Conlon, formerly assistant sales manager of the Federal Motor Truck Co., has joined his old "chief," John F. Bowman, who is now vice-president and sales director of the Acason Motor Truck Co., Detroit. There is probably no better known or more successful sales "team" in the motor truck business, and it has been a foregone conclusion in truck circles that Mr. Conlon would eventually follow "Jack" Bowman into the aggressive Acason organization.



H. A. CONLON,
Vice-President and Sales Director Acason Motor
Truck Co., Detroit.

Crane Manager Racine Sundry Div.

R. B. Crane, former sales manager of the Double Fabric Tire Co., has been appointed manager of the Sundry Division of the Racine Rubber Co., Racine, Wis. Mr. Crane is a veteran in the rubber business and his



R. B. CRANE,
Manager Sundries Division Racine Rubber Co.,
Racine, Wis.

past experience fully qualifies him for his new position. A complete line of accessories and repair materials are now being manufactured by the Racine Rubber Co. to meet the needs of the trade.

* * *

Anderson Heads Templar Sales.

Harry W. Anderson has been appointed general sales manager for the Templar Motor Corp., Cleveland, O. He was formerly connected with the Stutz Motor Car Co. as sales manager. Charles E. Bailey, formerly with the Hal Motor Co., has become assistant sales manager. The company has occupied its new plant and the Templar cars will be displayed during the coming shows.

* * *

Briscoe to Handle Redden Sales.

Arrangements have just been completed whereby the sale of Redden Truck makers will be handled by the Briscoe Motor Corp., of Jackson, Mich., which has manufactured these units in the past. The general offices have been moved from 1442 Michigan avenue, Chicago, Ill., to the administration building of the Briscoe corporation at Jackson.

The Most Remarkable Automobile Top Material — Yet Produced



DrideK with its leather finish, will not scratch or chafe—you can put up your top and feel sure that there are no marks on it; nothing to show where a big wrinkle has been strapped down.

DrideK with its leather finish, stands the hard wear that makes satisfied customers; and greatly increases the value of any automobile.

DrideK is one of the specialties in the big line of rubberized fabrics that has helped in popularizing our big line.

Send for samples and prices. They will meet with your approval, and fit well into your specifications.

L. J. MUTTY COMPANY
BOSTON, MASS.

SCOVEL IRON STORE COMPANY, *Pacific Coast Agents*
SAN FRANCISCO, CALIFORNIA

Elgin Increases Production 150%.

With the completion of the main building of the factory group of the Elgin Motor Car Corporation, of Chicago, there will be an immediate increase in the output of the company from 40 cars per day to 100 cars per day. In the past manufacturing has been carried forward by the Elgin Corporation through the use of many tents in connection with a comparatively small factory building, and a product of 40 cars per day under the circumstances was a most remarkable performance. Hardly four months have elapsed since C. S. Rieman, vice-president and general manager of the company, turned the first spade of earth for the new building. In the time intervening there has been erected a thoroughly modern factory of brick and steel construction designed along most modern lines for the rapid and economical manufacture of automobiles. In addition, there has been built an administration building. This is separate from the factory, is two stories and basement in height, and is 72 by 110 feet.

* * *

Franklin Output Again Increased.

The Franklin Automobile Co., Syracuse, N. Y., has increased its output of Franklin cars to 294 weekly, placing the company on a 15,000 cars a year basis. A short time ago the production of the company was 242 cars a week, then it was raised to 285 weekly.

* * *

McNaull Tire Plans Expansion.

The McNaull Tire Co. of Toledo, O., will expand its factory space in order to make possible the increased production with which it will meet the demand for McNaull tires.

Mason Earns 20 Per Cent on Common

The annual report of the Mason Tire & Rubber Co. for the year ending October 31, 1917, shows gross sales exceeding \$1,200,000 and total net profits amounting to \$181,504.36. Deductions for income tax reserve, preferred stock dividends paid during 1917, and preferred dividend reserve, leave a balance to be put into the surplus account of \$104,330.22. This surplus for the year amounts to within a fraction of 20 per cent on the common stock. The following directors were elected at this meeting: C. M. Mason, D. M. Mason, D. N. Mason, M. B. Mason, John H. Diehl, and R. W. MacKinnon. The officials were re-elected, namely: O. M. Mason, president; D. M. Mason, treasurer and general manager; R. W. MacKinnon, secretary. The stockholders voted unanimously to increase the par value of the preferred stock from \$10 to \$100 per share.

* * *

Dodge Rushes War Contract Plant.

The new munitions plant of the Dodge Bros. Motor Co., Detroit, is one of the most prominent examples of the magnitude and speed with which the industries of the company are rushing forward to meet the demands of the nations for the means wherewith to carry on the world war. The day after a contract for millions of dollars' worth of special recoil mechanism had been allotted to Dodge Bros. by the government, a force of hundreds of men, teams and machines was on the ground, excavating and assembling materials. Over night acres of ground have been transformed into broad level floors of concrete. The new plant will employ thousands.

New Firestone Wheel Sales Policy.

A new policy in the sale of demountable rims and wheels for Ford cars has been adopted by the Firestone Tire & Rubber Co., Akron, O. Formerly these sales have been made, through Firestone branches, to both jobbers and retail dealers. Under the new plan the Firestone Co.'s sales force will still push the sales of wheels equipped with Firestone demountable rims, but their orders will be turned over direct to the jobbers, who thus hold control of a much larger and better market. The sales campaign brings the trained experts of the manufacturer to the direct aid of the individual jobber.

* * *

Goodyear Profits Doubled.

Reports read at the annual meeting of the Goodyear Tire & Rubber Co., Akron, O., developed the fact that gross sales during the past year jumped from \$63,000,000 to \$111,000,000 and net profits from \$7,003,330.09 to \$14,044,206.10—an increase of 74 per cent in volume and 100 per cent in profits. And of this volume less than 1 per cent was contributed by direct war business. All of the directors were re-elected, as follows: F. A. Seiberling, C. W. Seiberling, G. M. Stadelman, F. H. Adams, P. W. Litchfield, H. B. Manton and J. P. Loomis. The directors in turn elected the following officers: F. A. Seiberling, president and general manager; C. W. Seiberling, vice-president and manager of purchases; G. M. Stadelman, vice-president and manager of sales; P. W. Litchfield, vice-president and factory manager; A. F. Osterloh, secretary; W. E. Palmer, treasurer and assistant secretary; H. J. Blackburn, second assistant treasurer. But one change was made in the list of officers—the election of W. E. Palmer as treasurer, succeeding F. H. Adams, who retires from that office, although retaining his membership on the board of directors.

* * *

Joseph Going to Strafe Kaiser.

H. B. Joseph, assistant advertising manager of the Kelly-Springfield Tire Co., has resigned his position to join the colors. He writes "Motor West" that he hopes to be back in New York on the job after having helped to decorate Unter den Linden with the Stars and Stripes.

* * *

Hunting Represents Garco Lining.

J. P. Hunting has been appointed special representative in charge of equipment sales for the General Asbestos & Rubber Co., Charleston, S. C., manufacturer of Garco brake lining. He was formerly connected with the sales of Hoffeecker speedometers.

* * *

Oklahoma Company to Build Six.

The Oklahoma Six car will be built by the Midland Motor Truck & Car Co., Oklahoma, Okla., backed by \$1,000,000 of Oklahoma capital. Heading, and president of the company is James Aydelotte, oil expert and chairman of the state board of affairs.



BRITISH FIND THAT MAXWELL CARS COME UP TO REQUIREMENTS.

Out of about four hundred Maxwell cars delivered to the British Government by the Maxwell Motor Sales Corporation of Detroit there has not been a single car rejected. Stringent regulations govern the British inspection of motor cars. Ordinarily there is about a 10 per cent reduction in the cars submitted. That not a single one of the 400 Maxwell cars submitted has been turned back by the British Government speaks volumes for the efficiency of the factory inspection of Maxwell cars. The cars go through two inspection tests before being delivered to the Government in London. All Maxwells are thoroughly tested while being made. When shipped to the Maxwell branch, No. 149 Lupus Street, Pimlico, London, S. W., the cars are given another inspection.

AC

Spark Plugs

Standard Spark Plug of America

Special for Ford Cars
A C CICO



3/8" Regular for Maxwells
A C TITAN



1/2" Regular for Willys-Overland
A C TITAN



1/2" Regular for Studebakers
A C TITAN

AC Plugs have proven to be the best under all conditions. That is why 80 manufacturers of Automobiles, Trucks, Tractors and Aeroplanes use them for regular equipment. The leading race drivers are using them. Your motor will not give its best performance unless equipped with AC. You will come to them in time. Why not buy a set now and note the improvement?

CHAMPION IGNITION CO., Flint, Mich., U. S. A.

8TB

Stop Rear Axle Trouble

8TB



BY
INSTALLING
THE

BAILEY BALL THRUST

At Left (Gear Side) of Ford and Chevrolet 490 Differentials
TO REPLACE FLAT THRUST WASHER

Rear axle breaks and difficulties are caused chiefly by the flat thrust washers at left (gear side) of differential wearing thin and causing drive and pinion gears to get out of mesh. These flat washers, having but a sliding contact, cannot help but wear thin—creating great loss of power and wear and tear on entire car.

But the BAILEY BALL THRUST BEARING made of carefully heat treated materials and containing eighteen 1/4-inch highest type balls, cannot wear thin, hence they keep gears in proper mesh, make them run smoothly and last indefinitely.

The Bailey bearing, by reason of the things it does, reduces friction in gears, consequently conserves power. Having a capacity for six times the maximum thrust, every bearing bears an unqualified guarantee that it will "stand up" under all conditions and hardships.

Dealers, repairmen and garagemen quickly recognized the advantages of a bearing of this type, and the profitable replacement business, as well as added prestige by installing Bailey Ball Thrust bearings.

Those not already carrying the Bailey in stock will promote their own interests by communicating with any Coast jobber for further details.

Sold through dealers and jobbers only. List price, \$3.75.

GEO. D. BAILEY CO.

8TB

1116 S. Michigan Avenue

Chicago, Ill.



An Exact Replacement. Fits to a 1000th part of an inch

8TB

Dodge Light Delivery Car Out.

The first Dodge Brothers light delivery cars destined for the Pacific Coast territory are being placed in the hands of the dealer agencies in the principal cities in this section. The new commercial model is priced at \$885. Except that various parts have been strengthened the new Dodge light delivery car is the same in specifications as the standard passenger car. The new light truck has a carrying capacity running as high as 1,500 pounds. The springs are stronger than in the Dodge passenger car, the tires are 33x4 inches all around and the steering knuckles have been made sturdier. The steering wheel is set at a higher angle to give more room for loading space and the gasoline tank is under the driver's seat. The frame has been strengthened and lengthened, giving a loading space of 72x43 inches back of the driver's seat, though the Dodge wheelbase of 114 inches is retained. Gear ratio is 4 to 1. The commercial car body is of pressed steel throughout, with permanent top and cab.

* * *

New Overland Prices Cover Tax.

The Willys-Overland Co., Inc., Toledo, O., has announced new prices on all models, effective Nov. 1. The model 90 light four chassis touring type will sell at \$795, the roadster at \$780, the country club at \$840 and the new sedan at \$1,240. The eighty-five touring car will be priced at \$930 and the eighty-five six at \$1,130. Willys and club sixes will sell at \$1,365. Willys-Knight four touring cars and eights will sell at \$1,525 and \$2,000 respectively. The new prices are all tax-free.

* * *

Philadelphia Batteries on Liner.

The monster ocean liner "Vaterland" and also the other German merchantmen taken over by the U. S. Government are being equipped with Philadelphia storage batteries for lighting, telephone, interior communication, etc. Walter S. Cranmer, formerly connected with the Waverley Electric Co., Indianapolis, and the Woods Motor Vehicle Co., Chicago, has been appointed assistant manager of sales of the Philadelphia Storage Battery Co., Philadelphia.

* * *

Continental Motors Cash Grows.

The Continental Motors Corp., Detroit, Mich., now possesses a larger cash balance than at any time for several months past, according to information sent out by the company to stockholders and which was the harbinger of a 2 per cent dividend payable Dec. 2.

* * *

Morse Represents Willys-Overland.

E. C. Morse, formerly vice-president of the Chalmers Motor Co., has joined the organization of the Willys-Overland Co., Toledo, O., and will act as special representative at Washington on all government matters for that company and its subsidiary companies.

Goodrich Buys Coal Mines.

The B. F. Goodrich Co., Akron, O., has purchased the Wheeling Valley coal mines at Bellaire, O., with the purpose of using the entire output of the mines. The purchase cost was approximately \$150,000. The new coal mines will protect the company from a shutdown of its plants enforced by a possible coal shortage.

* * *

Studebaker Additions Nearly Ready.

The additions to the plant of the Studebaker Corp., South Bend, Ind., costing about \$2,000,000, are rapidly nearing completion. All the new buildings are constructed of reinforced concrete. Among the additions are a four-story dry kiln, which will cost about \$75,000 and is said to be the largest plant of its kind in the country.

* * *

Homan Joins the Colors.

Another of the well-known automobile men who have recently accepted commissions in Uncle Sam's



MAJOR C. C. HOMAN,
Formerly Vice-President in Charge of Sales,
HAL Motor Car Co.

oversea army is Major C. C. Homan, formerly vice-president in charge of purchasing of the Hal Motor Car Co., Cleveland, O. Major Homan is one of the best known purchasing men in the industry, having been connected with the Overland and other large firms in this capacity. He is now under orders from the War Department, and is expected to go across very shortly.

* * *

Marathon Tire Ad Man in Camp.

Stanley M. Cramer, of the advertising department of the Marathon Tire & Rubber Co., Cuyahoga Falls, O., has gone to Camp Sherman, Chillicothe, O., with the Akron contingent.

* * *

Shockey, of Denby Sales, in Service.

Lieutenant H. G. Shockey, president of the Denby Detroit Sales Co., has gone into service in command of a motor truck company at Camp Custer.

Combined Motors Corp. Formed.

The Combined Motors Corporation of Chicago, has been chartered under the laws of the state of Illinois, to combine the business of the Bour-Davis Motor Car Co., manufacturers of the Bour-Davis motor cars; Shadburne Bros., of Chicago, manufacturers of the Shadwyck Six; the Dixie Motor Car Co., of Louisville, Ky., manufacturers of the Dixie Flyer, and the Collins Body Co., of St. Louis. Offices of the company have been established in Chicago and St. Louis. The officers and directors of the company are: B. L. Craig, president of the Collins Body Co., president; L. A. Shadburne, of Shadburne Bros., vice-president; H. P. Brown, treasurer; William Ewald, assistant secretary; Alexander Hoyt, chairman of the Executive Committee; C. J. Bour, F. D. Hartman, W. L. Shadburne and Elmer F. Adams, directors.

* * *

Silvex Re-incorporates for \$2,000,000.

The Silvex Co. has been re-incorporated under Delaware laws with a stock capitalization of \$2,000,000, of which half is common and half, preferred stock. The board of directors, as at present constituted, includes E. H. Schwab, president; J. H. Ward, E. B. Turn, W. M. Davidson and W. H. Lumpkin. The company will soon be settled in its new plant at Bethlehem, Pa., which is a modern concrete and steel factory, equipped with new machinery equipment.

* * *

Matlack Will Head Globe Tire.

J. C. Matlack, who resigned a short while ago as secretary and general manager of the Ajax Rubber Co., has been elected president of the Globe Rubber Tire Mfg. Co., Trenton, N. J. Following his retirement from the Ajax, Matlack became connected with the American Writing Paper Co. He will, however, relinquish all connection with the latter company to devote his entire time to the Globe company. His headquarters will be in New York.

* * *

Marathon Tire Sales Grow.

The Marathon Tire & Rubber Co., Cuyahoga Falls, O., enjoyed during the three months of September, October and November a volume of sales which was 60 per cent greater than that handled during any similar period of any previous year in the company's history. The factory has been behind orders for some time and the spring delivery orders now on the firm's books are about 80 per cent greater than those received at this time in any previous year.

Fonda With United Motors Service.

P. H. Fonda, formerly connected with the service department of the Dayton Engineering Laboratories company, has joined the forces of the United Motors Service, Inc., official representatives of the Delco, Klaxon and Remy companies, in the capacity of office manager. His headquarters will be at the general offices of the company in Detroit.

What can I give him for Christmas

A TWITCHELL

tire pressure gauge in a handsome holiday box gay with holly and ribbon (no price showing) makes a most acceptable gift. It will be a constant and pleasant reminder of the donor since every time the recipient uses it he will be saving himself money.

AT YOUR DEALER, OR
THE TWITCHELL GAUGE CO.
1215 MICHIGAN AVENUE
CHICAGO

Price
\$1.25

The
GIFT
for a
MOTORIST

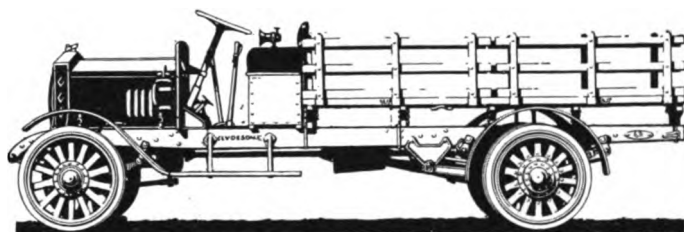


CLYDESDALE



Motor Trucks of $\frac{3}{4}$ Ton to 5 Ton Capacity

THE CLYDE CARS CO., Clyde, Ohio



For Motor Truck Upholstery



TRUCK SPECIAL

Satisfactorily meets the scarcity-of-leather situation. Costs less than even the poorest split leather but wears better.

Comes in 60-yard rolls, 50 inches wide. Cuts in multiples without waste.

You should use it to save money.

You should use it to save leather.

It is waterproof, washable—and its fine leather appearance and "feel" leave nothing to be desired.



Write for Truck Special Booklet,
Samples and Prices

Du Pont Fabrikoid Co.
WILMINGTON, DEL.

Works at Newburgh, N. Y. and
Fairfield, Conn.
Canadian Office and Factory:
Toronto

*World's Largest Makers of
Leather Substitutes*

M^T LOWE ALL YEAR RESORT

Beautiful Autumn weather
and scenery above the clouds

GO NOW

ROUND TRIP FARE

\$2.00

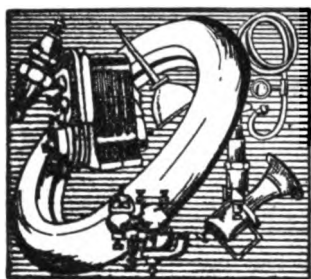
Five trains daily at
convenient hours, from
Main Street Station,
Los Angeles



SAVE GASOLINE
and help win the war
by using Pacific Elec-
tric Red Cars. Swift,
frequent, comfortable.
Cheaper than your
automobile.

SECURE FOLDER

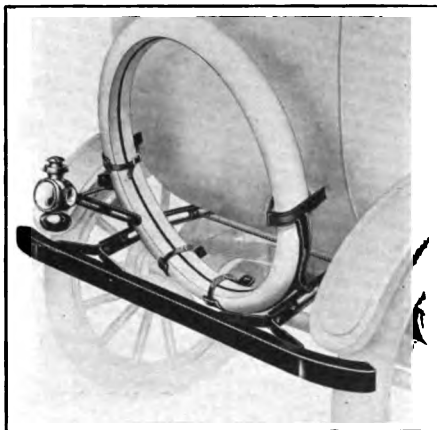
PACIFIC ELECTRIC RAILWAY



STEWART AUTOGUARD TIRE CARRIER FOR FORD CARS.

This model of Stewart Autoguard is designed especially for Ford cars. It is furnished with special brackets which make it possible for dealers to install the Autoguard on Ford cars in a short time. There is no cutting of metal or drilling of holes necessary to make the installation.

The Stewart Autoguard Carrier, besides being an Autoguard, includes a tire carrier, tail lamp bracket and license plate bracket. The tire carrier will hold two



STEWART AUTOGUARD AND TIRE CARRIER.

tires. Four straps are provided. The brackets which hold the tires, and to which the straps are secured, have two slots. This permits the car owner to strap one or two tires securely in place.

The Autoguard feature of the device is a real guard for the car—not a common bumper. It has a rigidity combined with springiness not found in the ordinary bumper. The channel bar is made of high carbon steel; the spring members are made of high carbon spring steel. The shock absorbing members consist of two full elliptic springs. This type of spring is found to be superior to the coil spring type. They have more than double the range of spring action and still have sufficient rigidity to resist effect and absorb heavy shocks. These springs, which fit in the channel of the Autoguard bar, extend away over towards the ends of the bar, where great strength is needed, for most shocks resulting from collisions are received at the ends of the Autoguard. The device sells at \$12.50, complete.

THE HANDY TERMINAL.

A. E. Francis, president of the Francis-Rand Co., Cleveland, O., has recently patented and placed on the market a terminal that eliminates all terminal troubles. The Handy Terminal is really a cable terminal and spark plug terminal all in one.

The jaws of the Handy are threaded on the inside and engage the threads of the spark plug center bolt. One motion raises the ring, compresses the steel spring, re-

leases the terminal and lifts it from the spark plug. There are no nuts to tighten or loosen or fish out of the drip pan. No tools are required, and the terminal can be attached or detached in one second.

The Handy can't work loose—the greater the vibration the tighter the jaws of the Handy grip, and the better the electrical contact. The method of fastening the magneto cable insures a permanent connection. The ferrule is fitted to the cable and the stripped wire firmly held by a copper clip, making a non-soldered connection that can't work loose.

The Handy is made in three sizes to fit every make of spark plug, and sells for 25c each.

BURNS KEROSENE AND SAVES MONEY.

The distinctive feature of the Detroit Kerosene Carburetor, which is manufactured by the Detroit Kerosene Carburetor Co., Kresge Bldg., Detroit, is that it atomizes the kerosene into the finest possible spray before vaporizing it, thus reducing the amount of heat necessary to complete vaporization.

Surrounding the kerosene fuel inlet and jets is a pre-heater which raises the temperature of the fuel as high as possible without vaporizing it. The resulting gas is thoroughly dry, and will not precipitate in the intake or cylinders.

There are two venturi tubes and two jets, one for low speed, the other for high. The small venturi is operating at all times,



NEW DETROIT KEROSENE CARBURETOR.

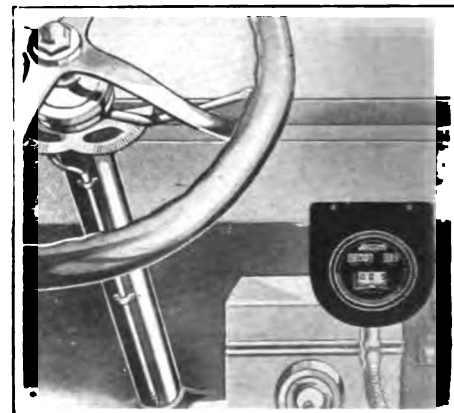
and by the use of the sliding venturi as the velocity increases the second jet is cut in automatically and operates at the higher speeds.

Gasoline is used in starting, and its use is continued sufficiently long to raise the temperature of the kerosene to the point where it will vaporize properly.

In actual tests on a Ford car a saving in fuel of 76 cents per 100 miles was secured. The Detroit Kerosene Carburetor is listed at \$22 f.o.b. Detroit, including gas tank, flexible tubing, brass tube and couplings, ready to be attached.

STEWART SPEEDOMETER FOR CLOSED FORD CARS.

Model 150-C of Stewart Speedometer is designed especially for Ford Sedan and Coupelet models. It combines all of the good features of the regular model, but is furnished with special flange for installation on inclosed cars which do not carry an instrument board. The plate is installed to the cowl by means of two nickel head screws. It is not necessary to alter the car in any way. All difficulties of installation have been eliminated by the very unique design of this model. The



STEWART SPEEDOMETER FOR CLOSED FORDS.

black enamel flange and black faced instrument harmonizes with the fittings of the car itself. The speedometer looks as though it were a part of the car, not an after-thought addition.

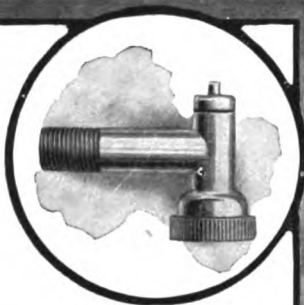
The instrument is built on magnetic type, with 60-mile capacity rotating speed dial. The Stewart Odometer consists of 100,000-mile season register and 100-mile trip register. The trip register can be easily reset to any mile or tenth of a mile without disturbing the season register. The retail price is \$11.75.

A NEW PRACTICAL TOW LINE.

The Auto Parts Mfg. Co., Milwaukee, Wis., has developed a very effective tow line, possessing exclusive features that make it one of the most practical that has yet been brought to our notice. These tow lines are made from either manila rope or substantial steel cable and have a patented non-slip buckle at each end (a special feature with the "Badger"), which makes the simplest and most effective fastening method possible. To make a connection it is only necessary to loop the rope through the buckle at any point desired, and set the hook between the loop, then pull. The harder you pull, the firmer becomes the grip. The "Badger" tow line presents a very timely sales offering, and the manufacturers report excellent sales.

Jan. 1—New York Show Number. Jan. 15—Chicago Show Number. Feb. 15—San Francisco Show Number.

YOU CAN'T TELL
HOW MUCH BENGAL
TIGER THERE IS IN
A WHITE RABBIT
UNTIL YOU PUT HIM
ON A MEAT DIET.



—and you can't tell how many miles your tires can give until you put them on a **REGULATED, MEASURED** air diet.

Just so many pounds pressure, no more and no less.

If you pumped up your tires every time they fell below the pressure specified by the tire-maker, they would last for the maximum distance.

Don't say pumping is too much trouble. With a

SCHRADER UNIVERSAL PUMP CONNECTION it is no trouble at all.

Ask your dealer to show you how it works.

Price Thirty-five cents.

A. SCHRADER'S SONS, Inc.
783-803 Atlantic Ave.,
Brooklyn New York

Investment vs. Expense

A cheap porcelain plug is a double expense. **FIRST:** It needs frequent renewals on account of breakage and sooting. **SECOND:** It's a waster of gas and money.

HERZ PLUG

"Bougie Mercedes"

once properly installed ask only one favor of you, viz.: **to leave them alone.**

They last as long as your pistons and crank shaft—a real investment.

They insure perfect and vigorous combustion of all the gas. Let us educate you up to Herz Plugs. They're \$1.50 at your dealer's, or



\$1.50

at your dealer's

or

HERZ & CO.
245 W. 55th St., New York

THREE BIG ISSUES of Motor West

January 1st
New York Show Number

January 15th
Chicago Show Number

February 15th
San Francisco Show Number

LAST ADVERTISING FORM FOR EACH
ISSUE CLOSING TWO DAYS
IN ADVANCE OF PUBLICATION DATE

MOTOR WEST PUBLISHING CO.
LOS ANGELES, CAL.

PISTON SERVICE



Light Weight, Any Make

Cast Iron Pistons

Are the BEST by TEST

FINISHED
SEMI-FINISHED
or **ROUGH**

LARGEST PRODUCERS IN THE WEST

W. H. JAHNS AUTO MACHINE WORKS
908-912 West Pico St. Los Angeles, Cal.

Mr. Car Dealer:

"TRADE IN" CARS MAKE READY SELLING TRUCKS

THE L & B truck converting unit will turn your slow-moving used cars into salable ton and a half, two ton or larger, trucks. L & B will make up units for any specified chassis, avoiding the fault of trying to fit a Studebaker frame to a Ford size attachment. This factory service to car dealers irons out the obstacle in the truck-converting road to used-car profits. Torbensen Internal Gear, Sheldon Worm type and Chain type Axles, in 1½ and 2-ton sizes, in stock. Larger sizes to order.

*Write today, tell us what you have on the floor, and we
will advise cost of making up units to correspond : : :*

L & B TRUCK MANUFACTURING CO. **LOS ANGELES**

Office and Salesroom: 1416 So. Los Angeles St.

Factory: 54 S. Boyle

SOME ATTRACTIVE TERRITORY OPEN—LIBERAL DEALER DISCOUNTS

Getting Maximum Service From Inner Tubes

WAYS AND MEANS of procuring the longest service from inner tubes is the theme of an educational campaign instituted by The B. F. Goodrich Rubber Co. in the interests of war economy.

Undue haste in replacing a punctured or blown-out tube is responsible for a multitude of these "sins." The most common mistake is pinching the tube. The tube is inserted in an uneven or twisted manner. This causes it to overlap or wrinkle, with the result that in a short time it will cut through where it has been overlapped and a leak develops. The same trouble is also caused sometimes by putting a new tube into the tire just as it is taken from the box. When the tube is applied after mounting, there is such an inrush of air that it will often buckle up the tube, thereby forcing a tiny section beneath the bead spreader.

Especially will this occur if the valve stem is not pulled out to its proper position. The operator should proceed slowly when applying the tube. Before putting it into the casing it should be given a couple of "shots" of air, then it should be applied carefully, the inside—the side on which the stem occurs—being always kept inside. When it is in the casing it should be "talc'd" carefully and the fingers forced all around the tire to make sure that the tale has been evenly distributed, and then, before the loose bead is applied, the tire should be given a little more air—enough to round it out nicely and prevent pinching.

The motorist should be cautioned against using too much tale. There are several powders procurable for keeping the tube from sticking to the casing, among these being soapstone, graphite and tale, but

the use of too much of any of these proves disastrous and a collection of substance in one place eats into the rubber. If, on the other hand, no powder be used, it will be only a short time before the heat generated will cook the tube.

Under-inflation is equally injurious to tubes. When the under-inflated tire passes over a stone both casing and tube are jolted against the rim and sooner or later a leak will develop. All tires should be inflated to the standard prescribed by manufacturers.

If a tire deflates suddenly the car should be stopped immediately, as continuous running means that the casing must slip circumferentially, ripping the valve stem out and tearing the tube.

Sand in a casing is another cause of the ruin of a tube. It very often happens that a motorist, while repairing a puncture on a road, permits the tube and casing to pick up particles which create a friction later and eventually tiny holes, which will scarcely show when the tube is submerged in water, assert themselves. Then the motorist runs to the dealer and charges him with selling a porous tube.

Putting undersized tubes in casings is a common fault. This strains the tube, makes the expansion all one-sided—on the tread side of the tire—and generally results in a sonorous blowout in No Man's Land.

Sunlight is a natural enemy of inner tubes. The sunlight, and any bright light for that matter, dries out the tube and makes it brittle and unelastic. It is then known as a "macaroni" tube. A cool dark place is the proper refuge for the reserve tube. The effect of grease and oils on tubes is well known.

A habit of motorists to carry tubes un-

protected in tool-boxes is often responsible for much subsequent trouble. Tools are being bounced against it as the car bounds along, its sides are chafed and become worn. It is weakened before it is even inserted in the casing. All tubes should be carried in a waterproof bag or well wrapped in newspaper. Use of space under the seat near the battery box for reserve tubes has its penalties, too. Acid from the battery frequently splashes over and douses the tube, and from that moment on deterioration starts.

NEW AMAZON TIRE ANNOUNCED.

A most graceful and distinctive Ribbed Tread Tire has just been announced by the Amazon Rubber Co., Akron, O. A glossy jet black body with a circling snow-white stripe on the sides gives the tire a touch of ultra-distinction and adds character to any car. The new tire has the same wonderful wear-resisting tread as the regular non-skid which the company has been producing and is also reinforced on the side walls with extra fabric breaker strips for protection against blow-outs. This anti-blowout feature is claimed to be exclusive in Amazon tires.

SPECIAL FIRESTONE PATCH FOR JOBBER'S DISTRIBUTION.

To meet the demand created by the many jobbing houses of the country for a special blow-out patch designed for distribution through them exclusively, the Firestone Tire & Rubber Co., Akron, O. announces the production of a full-sized patch of this description, especially designed. Deliveries of this addition to the company's accessory line are already being made, according to C. H. Gerhold, Western manager of the Firestone Company's accessories sales division.

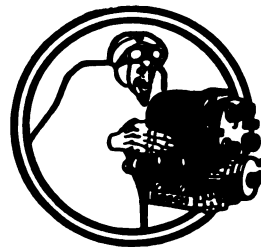


HOTEL ST. FRANCIS San Francisco

Center of the City's Life and Color

EUROPEAN PLAN FROM \$2.00

Management - James Woods



It's A Mistake

to buy an engine which depends upon batteries for ignition: because your engine's ability depends more upon your ignition system than upon any other factor. It is essential, then, that you select only the most reliable ignition method. Magneto ignition has proved to be the most reliable method, and the most reliable magneto has proved to be the

BOSCH MAGNETO

The ignition system which has been on the winner of every worth-while contest of motor cars, motor boats, motorcycles and aeroplanes.

BE SATISFIED

SPECIFY BOSCH

Write for Catalogue

Bosch Magneto Co. :- New York

Coast Branch: 1324 Van Ness Avenue, San Francisco

Coast Distributors: E. A. Featherstone, Los Angeles
Ballou & Wright, Portland and Seattle
Kimball - Upson Co., Sacramento

**PHILADELPHIA
DIAMOND
GRID
BATTERY**

The Best of Batteries

There may still be an opportunity to obtain selling rights in your territory if you act quickly.

Philadelphia Storage Battery Co.

BRANCHES:

1105-7-9 W. Pico St., Los Angeles, Cal.
37 Spear St., San Francisco.



**40%
Longer
Life**

FORD CAR OWNERS USE KEROSENE

(Coal Oil)

One Mile on Kerosene Costs Less than $\frac{1}{2}$ cent

One Mile on Gasoline Costs From $1\frac{1}{4}$ to $1\frac{1}{2}$ cents

BUY A DETROIT KEROSENE EQUIPMENT

Save 60% Price of Equipment \$22 f.o.b. Detroit

30 days Trial or MONEY BACK — ACT PROMPTLY!

These are days of strict economy

DETROIT KEROSENE CARBURETOR CO.

KRESGE BLDG.

DETROIT

Department 16

DENBY MOTOR TRUCKS

Pioneers of the internal-gear drive

Denby trucks are built in 1, 2 and 3 ton capacities, and with bodies for every line

DENBY MOTOR TRUCK COMPANY

DEPT. H.

Detroit, Michigan

ADAMSON VULCANIZERS

all use convenient and economical gasoline. The heat is automatically regulated. They are built in all sizes.

DEALERS: Order from your jobber today. If he can't supply you, send us his name.

ADAMSON MFG. CO., East Palestine, Ohio

The technicalities of tire construction do not interest you. It isn't what goes in but what comes out of a tire that counts. Well, anywhere from 8,000 to 10,000 miles is a common Kelly-Springfield performance.



Kelly-Springfield Tire Co.
Executive Offices
 Seventh Ave. at 57th St., New York.
General Sales Department
 1900 Euclid Ave., Cleveland, O.

WESTERN TRADE NOTES

Salt Lake City, Utah—The Ephraim Motor Co., capital \$9,000, has been incorporated by Andrew Armstrong, T. C. Hill, Anna K. Armstrong, Lydia Armstrong and Effie Hill. —Newton M. Myers has moved his motor truck top factory to 231-235 Spring St.—Arthur L. Willard has purchased an interest in the Stewart & Young Sales Co., which handles several lines of accessories and attachments.

* * *

Missoula, Mont.—The Missoula-Buick Co., capital \$25,000, has been incorporated by F. A. Williams, M. L. Lyman and E. F. Barnes.

* * *

Tucson, Ariz.—The Babbitt-Polson Co. of Phoenix, state dealer for Stutz, Marmon, Pierce-Arrow and Chandler cars, has opened a branch sales room here.

* * *

Phoenix, Ariz.—The Leach Motor Car Co. has secured the Reo car agency for the state of Arizona from the D. L. S. Skelton Co. of El Paso, Tex.

* * *

Martinez, Cal.—A. W. Sloan, Buick dealer for Contra Costa County, has secured the county agency for Racine tires from the Power Rubber Co. of San Francisco.

* * *

Bakersfield, Cal.—The Kern county agency for Grant cars has been taken over by Harris Bros.

* * *

King City, Cal.—Eugene Tabbott has purchased Brandt's Garage from Steglich & McKinley and in partnership with John Gonzales will operate it as the Los Ositos Garage.

* * *

Portland, Ore.—The Northwest Auto Co. has increased its capital stock from \$30,000 to \$60,000.

* * *

Stockton, Cal.—The San Joaquin Auto Co., Winton and Chandler dealer, has added the Hupmobile agency for San Joaquin county.

* * *

Oakland, Cal.—The Record Tire Co. will move to new and larger quarters at Twenty-third and Broadway.

* * *

Turlock, Cal.—Tesman & Brown have taken the Chandler car agency for Stanislaus county.

* * *

Martinez, Cal.—A. W. Sloan has taken the Buick agency for all of Contra Costa county north of Richmond.

* * *

Riverside, Cal.—A. F. Isaacson, former Oldsmobile branch manager, has taken the agency here for the Jordan car, with headquarters at the Mission Garage.

"Exide" Batteries

DISTRIBUTORS

We Repair all makes of Batteries, Generators,
 Coils, Magnetos and Starters

PROMPT ATTENTION GIVEN TO COUNTRY TRADE

Harry W. Harrison

F-5971 831 LOS ANGELES ST. Main 6582

Acason THE OWNER FIRST TRUCKS

This company has an attractive proposition to offer desirable distributors and dealers in Pacific Coast territory.

1½-ton Truck ..\$2100.00 3½-ton Truck ..\$3000.00
2-ton Truck 2400.00 5-ton Truck 4200.00
Light Tractor\$2500.00
Heavy Duty Tractor 3800.00

ACASON MOTOR TRUCK COMPANY
DETROIT

KELLOGG Engine Driven Tire Pump

"No Oil Spray With Air"—Guaranteed.
"All Metal Construction"—Everlasting.

Installation Fittings for Practically
All Makes and Models of Cars.

Send for Literature.

KELLOGG MFG. CO.,
ROCHESTER, N. Y.



PHONE:
Main 4062

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A-4062



AUTO AND TRUCK
SPRINGS

WHEELS, BUMPERS
FORGINGS

Wholesale

Retail

UNITED STATES SPRING CO., Inc.

Successors to A. & F. SPRING CO.,
1120-22 South Los Angeles Street, LOS ANGELES.

A P E X

Motor Oils

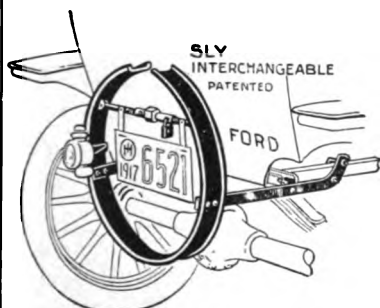
THE HIGHEST POINT OF EFFICIENCY

Gasoline "with the Punch"

PUENTE OIL CO.

Oldest Refiners and Producers on the Coast

BE UP-TO-DATE ON TIRE CARRIERS



The strap kinds are obsolete and unsightly. The Sly interchangeable—Ford or Chevrolet quickly—neatly does the trick—take any casing or demountable—cost no more. Beware of imitations. If your Jobber doesn't list, write us for complete catalogue—of real Carriers and "Better Springs."

NEW ERA SPRING & SPECIALTY CO.

890 Woodward Avenue,
Detroit, Mich.

Elgin Six

"The Car of the Hour"

Big, Beautiful, Impressive, Powerful, Dependable,
Economical

"Built Like a Watch"

4-Passenger Roadster **\$1095**
5-Passenger Touring Car.....

Subject to Change Without Notice
Write for descriptive catalogues

Elgin Motor Car Corporation CHICAGO U. S. A.

HARROUN

A car of popular price, designed by Ray Harroun, in which a new type of four-cylinder motor develops revolutionary power and efficiency.

Harroun Motors Corporation

General Offices, Detroit

Plants, Wayne, Mich

Quality in Motor Trucks

It has been our endeavor to create a commercial vehicle that would excel first of all in the quality of the material used, and second, in the economy of its operation. :: ::
Our reputation for producing the most lasting truck is recognized by our many users. :: :: :: :: :: :: ::

We offer for your convenience, the following sizes:

1½ Ton 2 Ton 3½ Ton 5 Ton 7 Ton

HURLBURT MOTOR TRUCK COMPANY
133d St. and Harlem River :: New York, N. Y.

"Asphalt-Base Oil Ideal Lubricant"

Ford

—E. I. Veitch, Oakland—"California asphalt-base oil forms an ideal lubricant for a Ford car."

Studebaker

—Studebaker Garage, Stockton—"having used Zerolene for over six years, feel justified in recommending it to users of Studebaker cars."

Dodge

—McArthur Bros., Phoenix—"have used Zerolene exclusively in all our Dodge Brothers cars."

Oakland

—Oakland Auto Sales Company, Portland—"Zerolene has proved a satisfactory lubricant in our Oakland cars."

ZEROLENE

The Standard Oil for Motor Cars

Endorsed by Leading Car Distributors.

—because the records of their service departments show that Zerolene, correctly refined from California asphalt-base crude, gives perfect lubrication—less wear, more power, least carbon deposit.

Dealers everywhere and at our
service stations.

Standard Oil Company
(California)

Seattle, Wash.—The Breeze Auto Truck Tire Co., capital \$100,000, has been incorporated by H. J. Breeze, and William S. Worden.—The Brigham Motor Car Co. has brought its Smith Form-A-Truck and used car departments together under one roof in the company's new building at 513 E. Pike St.

Mt. Vernon, Wash.—The Tyson Garage has been incorporated for \$20,000 by R. L. Tyson and M. Heller.

San Pedro, Cal.—David Keightley has purchased the interest of L. J. Harris in the two local garages operated by Harris & Phillips, Chalmers and Buick dealers.

Los Angeles, Cal.—The Damon Specialty Mfg. Co., manufacturer of Nonolio polish, has located its headquarters in the building at Eleventh and Figueroa Sts., formerly occupied by the Pearl Motor Car Co.

Redwood City, Cal.—The Buck & Fitzpatrick repair shop will be enlarged by the building of an addition to cost \$2,700.

Hollister, Cal.—The Overland and Willys-Knight car agencies for San Benito county have been taken over by P. J. Williams.

Tacoma, Wash.—The Tacoma Tire Service Co. has changed its name to Tacoma Tire Co.—The headquarters of the Tacoma Speedway Association have been moved to 2140 Pacific Ave.

Reno, Nev.—Scott & Hays have taken the King car agency.

Yerington, Nev.—G. D. Fraser of the Yerington Garage has purchased entire control from H. W. McNeil.

Carson City, Nev.—The Turbine Muffler Mfg. Co. has been incorporated with \$50,000 capital stock by R. C. Savage, J. G. Ellis, William Muller, J. Smythe and P. B. Ellis to manufacture automobile parts.

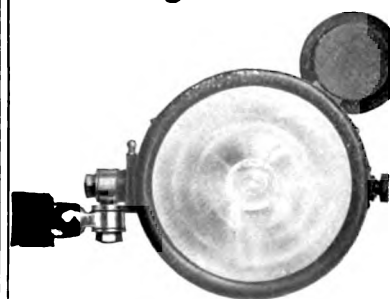
Oakland, Cal.—L. M. Griffin, Cole agent, has appointed Samuel Keeny to handle the sales end and will act as chief executive, while the firm name will be changed to Cole Motor Car Co.—Berger Bros., Alameda county dealers for Gates Half Sole tires, will open a new store at 2201 Broadway.

Roseville, Cal.—Edward Carson has purchased the Al Moore Garage.

Fresno, Cal.—The Fresno Lubricating Oil Co. has been opened by John Dougherty to sell automobile lubricating oils and greases.

Sacramento, Cal.—The J. J. Jacobs Co., Studebaker dealer, has occupied its new four-story building here.

"The Light That Shows the Road"



The S & M is the only Spot-Lite on the market that complies with the California State Law.

SAFETY FIRST—BUY AN S & M

For sale by all Jobbers and Dealers of Automobile Accessories.

25413

**S & M LAMP CO. 117 West 38th Place
LOS ANGELES**

Inter-State

INTER-STATE

The best light car on the market today. Economical in every way, and tremendous Power. Once an Inter-State owner always an Inter-State owner.

WRIGHT MOTOR CAR CO.
1001 SOUTH HOPE ST.
AS772 Distributors California and Arizona Main 827

Inter-State

OLYMPIAN

MOTOR CARS

114 inch wheel base, cantilever rear springs, full floating rear axle, vacuum gasoline system and factory equipment that includes a spotlight, a bumper, a motometer, an ignition lock and an extra rim.

37 H. P. motor—smooth running and quiet. Consistently gives 18 miles per gallon. Full streamline body—double curve design, slanting windshield.

Write for dealer proposition


\$965

f. o. b. factory

OLYMPIAN MOTORS COMPANY,

Pontiac, Mich.

Main 1076 **CAMBRIA SPRING CO.** F 5233
Incorporated
"WE SAVE YOU MONEY"



Wheels and Rims
Tire Racks and Platforms

All Makes in Stock
Wholesale and Retail

AUTO AND TRUCK SPRINGS

Demountable Rims Sold and Applied
Spring Steel Bumpers

SPRINGS REPAIRED, FORGINGS AND FRAMES STRAIGHTENED
Factory: 913-921 So. Santee St., Los Angeles, Cal.
Office: 916-918 So. Los Angeles Street

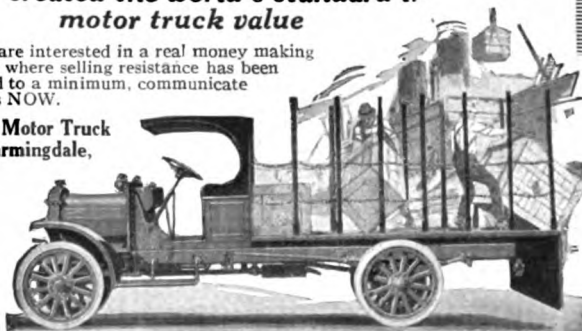
THE FULTON TRUCK

1½ Ton Capacity

Has created the world's standard in motor truck value

If you are interested in a real money making agency where selling resistance has been reduced to a minimum, communicate with us NOW.

Fulton Motor Truck Co., Farmingdale, L. I., N. Y.



Save the Nation's Gasoline with the

SUNDERMAN \$6

Vacuum Carburetor

This price maintains on Ford and Metz models
Other cars \$8 and \$10, depending on fittings necessary

This perfect carburetor will save you, no matter what your car, from 30 to 50% in your gasoline consumption. At the same time it will give your motor power, speed and flexibility beyond your fondest hopes.

It's your duty to your country to save gasoline when you can. It's a dealer's duty to promote the sale of an instrument that will cheapen the cost of running a car.



Send in your orders now—Fall is a big carburetor season

SUNDERMAN CORPORATION

17 Chambers Street (Dept. C) NEWBURGH, N. Y.
Western Office: 408 Kresge Bldg., Detroit.



RIVES AUTO PEDAL
Neverslip Pads \$1 per Set
INCLUSIVE

Cover the entire Field—Rubber Vulcanized through and locked securely to the metal.
See R. Rives Mfg. Co., Inc. 2187 Westworth Bldg., New York

GRÜSS AIR SPRINGS

The Luxury Shock Absorber for Quality Cars at

CARTER & VANBERG'S

775 Towne Ave. Bldy. 8306. LOS ANGELES.

PRESSED STEEL PARTS FOR AUTOMOBILES AND TRUCKS

ESTIMATES CHEERFULLY FURNISHED

The Bossert Corporation

UTICA NEW YORK

MOTOR WEST

Reaches a larger percentage of dealers than any automobile publication circulated on the PACIFIC COAST.

KISSELKAR

In the Interests of Increased Personal Efficiency and Economy—See, Inspect and Compare These Kissel Features

The ALL-YEAR Car

America's original dual-purpose car—that changed the motoring habits of a Nation. The ALL-YEAR Top is **built-in**, not on, with no visible fastenings or attachments—no rattles, draughts, or leaks—and is entirely removable. As an open, roofless, touring car—or a winter closed coach, it is complete to the minutest detail.

The Hundred Point Six

The car of a Hundred Quality Features—that has for over a year met fully the rigid demands of exacting car buyers. Its pronounced superiority in mechanical construction, body designing and dependable performance is due to its being Kissel-built from the ground up.

The New 4-Passenger Sedané and 5-Passenger Staggered Door Sedan

The new ALL-YEAR Top is entirely removable and all side windows may be lowered or raised—an exclusive Kissel feature. The new Semi-Victoria Style Summer Top is the most original and exclusive made.

Your nearest Kissel dealer is now taking orders for an early delivery. See him without delay.

DEALERS—Investigate the Kissel line, with the exclusive Kissel innovations and features that double and treble its utility, economy, and completeness. Write us today.

PACIFIC KISSEL KAR BRANCH

SAN FRANCISCO—VAN NESS AT GEARY

PORTLAND

LOS ANGELES

OAKLAND

FRESNO

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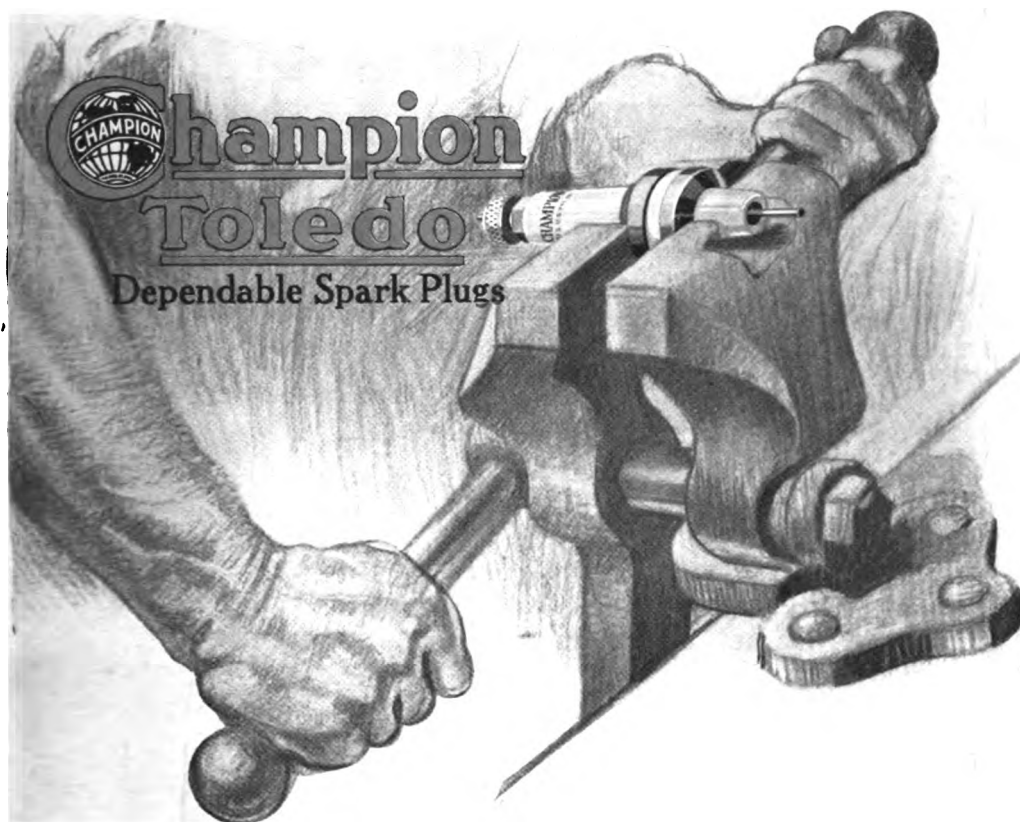
Motor West

THE MOTORING AUTHORITY OF THE PACIFIC COAST

VOL. XXVIII. No. 6

JANUARY 1, 1918

\$2.00 A YEAR, 10c A COPY



Heavy
Stone
for High-
Powered
Cars
\$1.25

IF YOU put your spark plugs in a vise and exerted all your strength to subject them to the greatest possible pressure, you would expect the porcelain to crumble.

Yet that's virtually what they must stand in your motor.

As you get under way, the explosions in your cylinders become so rapid that the force they exert is practically continuous.

In Champion-Toledo Dependable Spark Plugs the shoulders of the porcelain insulators are cushioned against this tremendous pressure.

The two patented copper gaskets that protect the

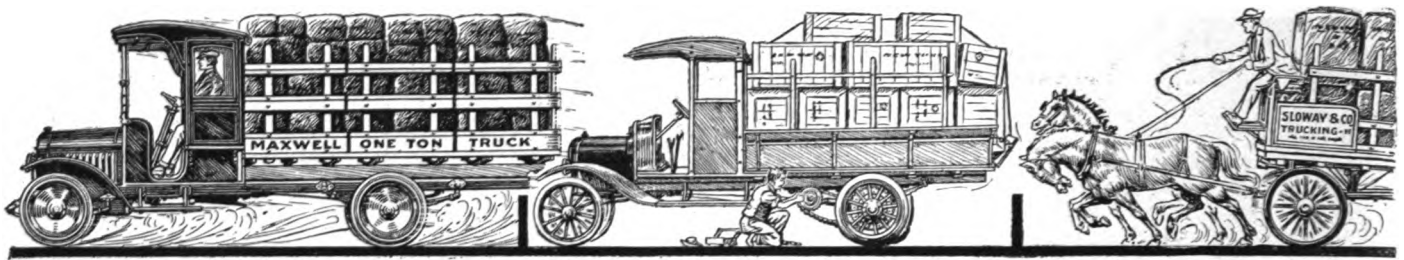
porcelain where the pressure comes are lined with asbestos so that the metal cannot touch the porcelain.

That's one reason why Champions are so much more durable and dependable than ordinary spark plugs.

Sell the car owner the Champion-Toledo plug designed to serve his kind of motor (your Champion chart shows which one) and you have assured your customer maximum efficiency and durability.

Keep your Champion stock complete—it means biggest possible volume of spark plug sales, quick turnover, maximum profits.

Champion Spark Plug Company, Toledo, Ohio



Speedy—Efficient—Economical

Makeshift—Unreliable—Costly

Slow—Uncertain—Costly

America Must Have More and More Motor Trucks

*Business is Depending More
and More on Motor Trucks*

The Maxwell One-Ton, Worm-Drive Truck is sweeping the country today.

Maxwell Truck dealers are making big profits on their truck sales—and the truck sales are increasing by leaps and bounds.

The Maxwell One-Ton, Worm-Drive Truck is the best suited to 80 or 90 per cent. of the needs of the delivery business.

It is lower in cost and lighter in weight than any other truck of equal specifications—and very much more economical to operate.

We knew we had hit the nail on the head when we put the Maxwell Truck on the market, but the tremendous and ever-growing demand for the Maxwell Truck has amazed even us.

Our dealers are crying, "Rush trucks to us—we can sell all you send." Now we're prepared to supply them with the trucks.

Play safe.

We still have good fields open to the right dealers.

Get in on the ground floor. It may be too late tomorrow.

Write or wire quick.

Maxwell Motor Sales Corporation

Detroit

Michigan

MAXWELL ONE-TON TRUCK

WORM-DRIVE

MOST MILES PER GALLON - MOST MILES ON TIRES

Mention "Motor West," Please, When Writing to the Advertiser

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NO GRADES TOO STEEP FOR THE DUPLEX 4-WHEEL DRIVE

STURDY and dependable, with irresistible reserve power, Duplex 4-Wheel Drive Trucks begin their notable haulage tasks where other types of commercial vehicles leave off. Exclusive application of the Duplex 4-Wheel Drive principle makes it possible for Duplex trucks to haul capacity loads under conditions that prevent the operation of any other type of heavy haulage vehicles.

No grades are too steep; no roads too snow-embanked; no sand or mud too deep for the Duplex—the motor truck that is equal to any emergency.

Built for year-round service Duplex Trucks are on the job spring and summer, fall and winter—12 months of every year—performing satisfactorily under most adverse road conditions. They are opening up new territory to motor truck transportation—hauling raw materials and finished products overland from city to city—giving never-faltering service.

Duplex Trucks are built especially for contractors, road builders, manufacturers and jobbers—and are delivering capacity loads at low-

est ton-mile costs. Let us send you data showing how profitably the Duplex is solving haulage problems in your line of business. Write for our catalog and the heavy haulers' magazine, "Duplex Doings", issued in the interest of better transportation methods.

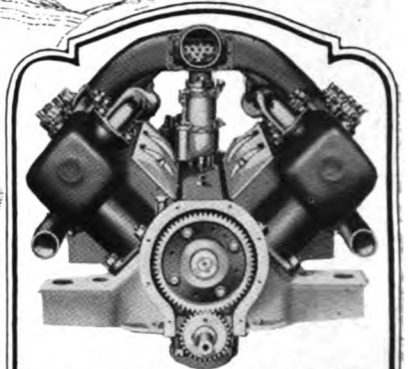
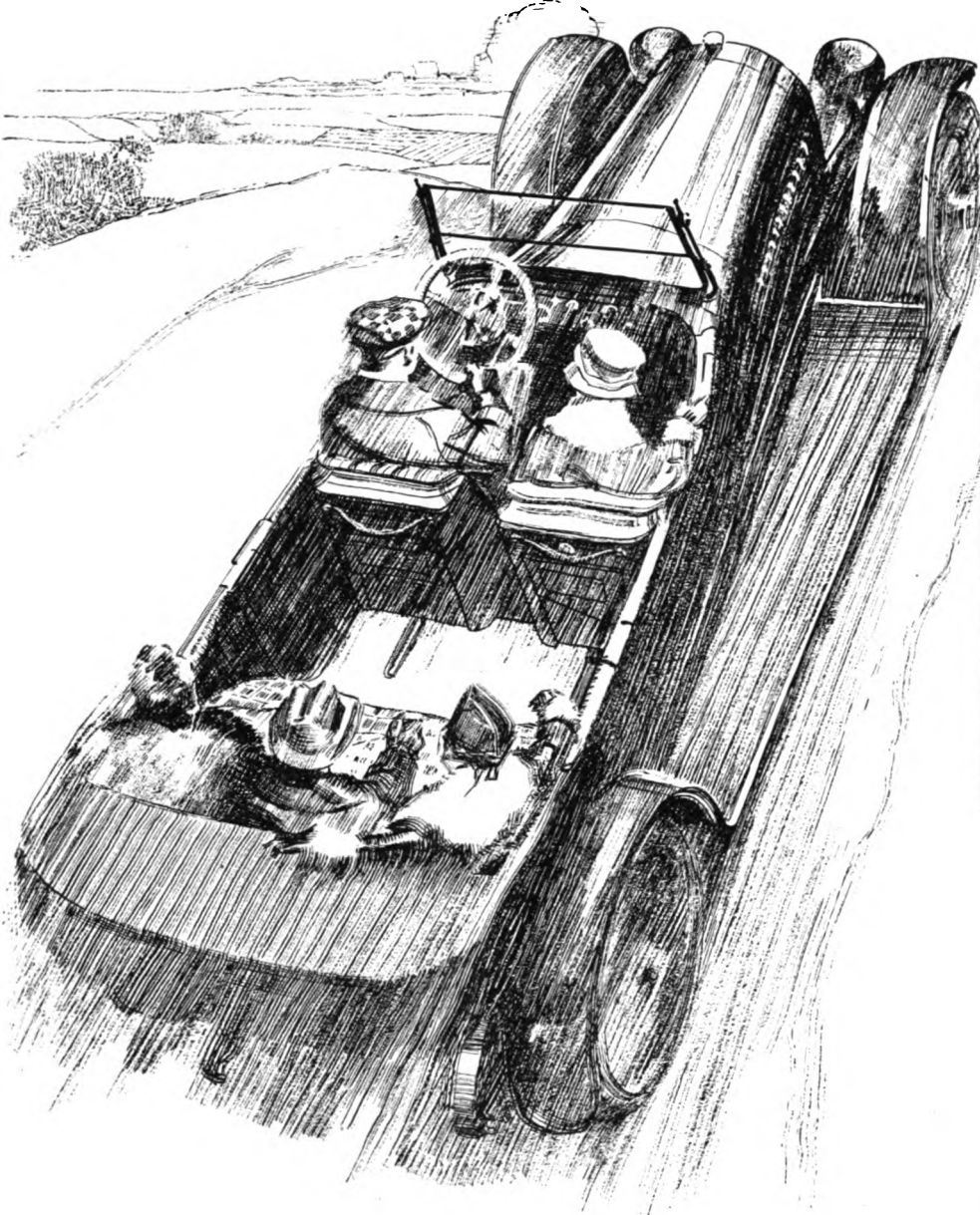
TO DEALERS—Our production has been trebled and an opportunity is now offered established dealers in many sections of the United States to become distributors for the Duplex—the original 4-wheel drive truck. This is an opportunity of a lifetime to aggressive dealers—business men who are following the trend of development in the motor truck field. Write or wire today for complete specifications and our dealer proposition.

Address all communications to Dept. 102

DUPLEX TRUCK COMPANY
LANSING, MICHIGAN

NORTHWEST AUTO CO., Portland, Oregon, Western Distributors

OVER THE TOP



As far as we know no other 8-cylinder internal combustion motor is as simple and compact as this one. By the elimination of 80 parts we have made this eight practically as simple as the old four cylinder motor. At the same time, the flexibility, power, speed and endurance of the 8-cylinder type have been retained, in full measure.

Signatures **Edgar Apperson**
Elmer Apperson

APPERSON

The zest for difficulties—the sweep of power that lifts the car to the brow of the longest and steepest hills—that's the paramount quality of the Apperson 8.

You don't have to "rush" the hills. A standing start at the bottom—a quick pick-up and you'll breeze over the top at a speed that thrills or glide over lazily—as you choose.

The 8-cylinder motor contains but one camshaft. The ordinary 8-cylinder motor has two. The Apperson possesses only two cam gears instead of three. There is no trigger board on the Apperson 8 motor, and with the elimination of this mechanism dozens of small trouble-making parts disappear.

But the effectiveness of the Apperson 8 motor is only typical of Apperson performance throughout.

For years the Apperson has delivered big car service at small car cost.

130-inch wheelbase and all that means in easy riding and good appearance are to be had in the Apperson 8, at a low first cost. And the expense of gasoline, oil and tires is exceptionally low. Twenty-five years' experience explains Apperson worth. To appreciate Apperson excellence you should drive the car Yourself. Your dealer is ready to give you a demonstration you will remember. See him.

APPERSON BROS. AUTO CO., Kokomo, Indiana

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ARMLEDER

Motor Trucks

Open territory on the Pacific Coast is available to progressive, well financed Dealers for the exclusive sales representation of

ARMLEDER MOTOR TRUCKS

The makers are financially strong, long established, and liberal. The Dealer is assured of the strongest co-operation in selling and service.

Dealers must be prepared to stock a certain number of trucks and the essential replacement parts and operate a satisfactory service equipment.

The Armleder proposition merits your investigation.

Write now!

2-Ton Worm Drive 3½-Ton

ARTHUR H. HERTZ

112 MARKET ST., SAN FRANCISCO

In Charge of Western Sales
ARMLEDER MOTOR TRUCKS

Manufactured by The O. Armleder Co., Cincinnati, Ohio.



Rear View of Williams Spotlight

...THE...

Williams Spotlight

TWO SIZES (6 AND 7 INCHES)

Model A, \$9.00

Model B, \$10.00

Has adjustable control to comply with requirements of the lighting laws of all States. May be used for either left or right side of windshield.

Detachable for Trouble Lamp or for lighting camp at night. Has inclosed dust-proof and water-proof switch.

We sell through jobbers only, and are represented on the Pacific Slope by

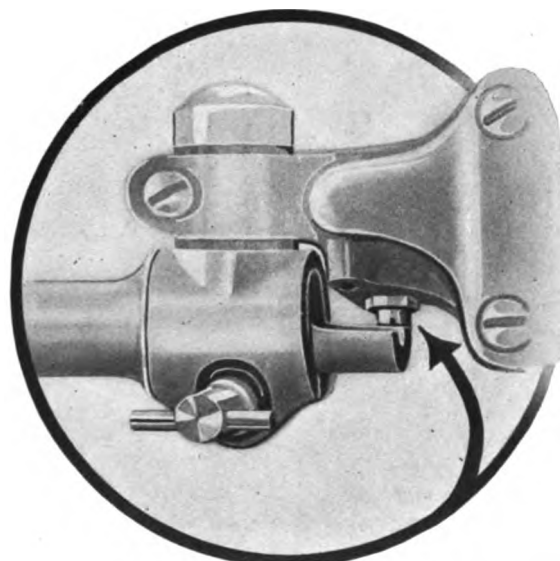
HUGHSON & MERTON, Inc.
Los Angeles, San Francisco, Portland and Seattle

MANUFACTURED BY

WILLIAMS MFG. CO.

310 North Flower Street

SANTA ANA, CAL.



Detail of Adjustable Control Feature of Williams Spotlight

MCGRAW PRODUCTS

Pneumatic Tires • Motor Cycle Tires • Inner Tubes



Value

THE foundations of McGraw value are: 1. Large output, enabling economical production. 2. A high grade tire at a reasonable price. 3. Warranted mileage. 4. Widespread service.

These fundamentals have made the McGraw Plant one of the largest tire factories in America and have built a permanent, profitable business for wholesale distributors through whom McGraw, Imperial, Pullman and Congress Tires and Tubes are sold.

There are other factors also, which emphasize the value of McGraw Products and Policies to the distributor, dealer and user. Let us tell you more about them.

THE MCGRAW TIRE & RUBBER CO.

East Palestine, Ohio

Distributing Warehouses • New York • Atlanta • St. Louis • San Francisco

Mention "Motor West." Please, When Writing to the Advertiser

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MOTOR WEST

THE MOTORING AUTHORITY OF THE PACIFIC COAST

VOL. XXVIII., No. 6

JANUARY 1, 1918

\$2.00 PER YEAR

MOTOR TRUCKS AT S. F.'S 1918 SHOW

Special Building to Be Erected Outside Auditorium to Accommodate Commercial Vehicles and Tractors.

The Second Annual Pacific Automobile Show, to be held in San Francisco, February 16-24, 1918, will include a large display of trucks, tractors and commercial cars in addition to the passenger car exhibits. In a recent meeting of the local car dealers' association it was decided to house the commercial vehicle end of the show in a large tent or some other kind of temporary structure, which would be erected upon the vacant ground that lies adjacent to the Exposition Auditorium building, where the show will be held again this year. This apparent solution of problem of so locating the commercial cars as to give them a fair portion of the total attendance was shown to be of no avail when the city board of supervisors refused to allow the erection of a temporary building on that location. The reason adduced was that such a structure would mar the beauty of the city's Civic Center, upon which the Auditorium faces, although it would not stand for more than ten days.

Denby Agent in Ore. Is Leader.

The Oregon Motor Car Co., of Portland, has won the distinction of being the leading Denby truck distributor in the United States. The announcement of the company's top standing in this respect was made during a recent visit in Portland by M. E. McKenney, sales manager of the Denby Motor Truck Co., of Detroit.

Duplex Truck in Seattle.

The Duplex truck will be handled in western Washington in conjunction with the Indiana and Reo trucks by the United Motors Co., of Seattle, Wash.

Used Car Show in Salt Lake.

Motor car dealers in Salt Lake City, Utah, are discussing the possibilities of a used car show, to be held at the same time as the coming annual 1918 new car show, Feb. 26-March 2. It is held that the used car business is a legitimate end in the car dealer's activities and as such deserves to be treated with the same degree of dignity and attention as the selling of new cars. In a used car show the local dealers are certain they can prove that cars which they have rebuilt and overhauled will give full value for their prices.

Breyer Heads Don Lee L. A. Sales.

Robert E. Breyer has been appointed sales manager for Don Lee, Los Angeles, Cal., Cadillac dealer. He has been one of the leading salesmen in the company's Los Angeles house, has sold more Cadillac cars than any other salesman, has been a consistent winner of sales contests and for the past four years has been the lecturer on cut-open Cadillac chassis at the San Francisco and Los Angeles shows.

Speers Adds Commerce and Signal.

Commerce and Signal trucks will be distributed in the Southern California territory by the Speers Motor Co. of Los Angeles, well known as Haynes car dealer for the southern part of the state. The Commerce truck is sold in a one-ton capacity size, which meets the all-around demands of transportation. The Signal truck line embraces one-ton, one-and-a-half-ton, two-ton, three-and-a-half-ton and five-ton sizes.

Seager Selects New Quarters.

S. F. Seager & Co., of Los Angeles, Cal., distributors of Jordan and Grant cars, will move into new quarters about Feb. 1, located on the east side of Figueroa St., south of Pico St. The building will have a frontage, including drive-way, of 100 feet on Figueroa and a depth of 155 feet. The salesroom will have dimensions of 90x40 feet and directly in the rear will be the firm's office and wholesale department.

CAL. OWNERS WILL GET CERTIFICATES

1918 Licensees Must Carry History of Their Cars in a Conspicuous Place—Mission Bell Will Be Emblem.

Approximately three hundred thousand blanks are now being sent out by the California state motor vehicle department to registered owners of automobiles in the state. Accompanying the blanks are applications for drivers' licenses, which are required by the law of every person who drives a motor vehicle. There is no charge for the operator's license, except a fee of 25 cents collected for another to replace the first one when lost. Minors may secure these licenses when they are vouched for by parent or guardians. The issuance of the so-called "mission bell" or "liberty bell" seals for 1918, which replace last year's "poppy" seals and which will also be fastened on the number plates, has already begun.

A new feature of the licensing law for 1918 is that every motor vehicle owner will receive a certificate showing his name, address, make of car, the year it was built, type, model, engine number, number of cylinders, bore and registered horsepower. With the certificate will come a small metal case with isinglass front, which must be fastened to the car in a conspicuous place. The certificate will be signed by the owner on receipt. The certificate carries stubs for transfer of ownership, etc., in case the car is sold, acting as a kind of a bill of sale. The certificate will serve to identify the owner and the car and will greatly assist the police in the enforcement of motor vehicle and traffic laws.

Another new provision of the motor vehicle law for 1918 is that which compels every trailer weighing more than 2,000 pounds to have a license, costing \$2, in addition to the regular license carried by the towing car.

J. S. CONWELL, L. A. SHOW MGR., IS DEAD

Expires Suddenly While Returning From Trip Ordered by Physician After Hard Work on Show.

J. S. Conwell, one of the pioneer and most well known figures in the history of the automobile trade in Southern California and still better known to the people of Los Angeles as president of the city council of the southern metropolis, died recently at Blythe, Cal., at the age of fifty-eight years. When death came he was returning from a vacation in Arizona, where he was resting from the strenuous labors entailed by the recent Los Angeles automobile show, of which he was manager. Even during the interval of the show Conwell was not in the best of health, but under his direct supervision the recent Los Angeles show was, without the shadow of a doubt, at once the largest, most handsomely staged and most successful of its kind the southern city has ever witnessed.

To the automobile trade world on the Coast he was widely known as president of the Conwell-Hathaway Co. of Los Angeles and as manager of several motor car shows held in Los Angeles. Originally a native of Minnesota, he came to Los Angeles in 1882. In 1894 he became connected with the bicycle industry in San Francisco, but it was not until 1907 that he entered the automobile industry in Los Angeles. In that year he became secretary and manager of the United Motors

Co. In 1899, while connected with the Waverly Co., he built the first Waverly electric passenger car. In 1911 and 1912 he was president of the Motor Dealers' Association of Los Angeles. In the civic politics of Los Angeles he was a prominent figure and at his death was serving his third term as a city councilman.

Pacific KisselKar Holds Banquet.

The Pacific KisselKar branch organization of San Francisco and Oakland, to the number of 104, together with the managers of the company's branches in Los Angeles, San Diego, Portland, Fresno and Seattle, recently attended the annual banquet of the company. Conforming with the branch organization's custom of several years, each employe who had been connected with the company for at least a year, received a check representing his share of the company's profits during the past year. According to the figures of Treasurer Campbell the year 1917 has been the most successful in the history of the Pacific KisselKar Co. Figures quoted by him showed that the branches transacted a million dollars' worth more of business during this year than in 1916. At the banquet President W. L. Hughson, acting as chairman and toastmaster, announced the advancement of Campbell to the position of second vice-president and general manager of the entire KisselKar organization on the Pacific Coast. The company's service flag, which was displayed at the banquet, showed that forty-eight men from the Pacific KisselKar branches are serving in the United States forces.

Briscoe Branch in San Francisco.

The Briscoe Motor Corp. has established a factory branch in San Francisco, Cal., incorporated under the name of the Briscoe-Pacific Co. The announcement of the new Pacific Coast branch follows close on the heels of the taking of the Briscoe car agency for Northern California by the H. V. Carter Co. of San Francisco. The new branch will carry a complete stock of parts and will also hold stock cars in San Francisco and Los Angeles where-with to supply Briscoe dealers. H. M. Clark has arrived from the Briscoe factory to take charge of the service and parts department of the new branch. Also from the factory have come Don Peake and L. W. Turner, the former to act as manager of the sales department with Turner as his assistant. The opening of the branch took place under the direction of J. R. Findlater, general supervisor of sales for the Briscoe Motor Corp., who arrived on the Coast with that intent.

Stelling Buys Out Arnold.

Jan H. Stelling, well-known through his connection as partner in Arnold & Stelling, San Francisco, distributors of Simplex, McFarlan and Scripps-Booth cars, has purchased the interest of his partner, George K. Arnold, in the company. To date Stelling has concentrated on the office and business end of the firm, but will now take over the sales end also.

S. F. & Phila. Equal in Chandler Sales

Disregarding other differences of size and location, San Francisco, Cal., and Philadelphia, Pa., have run neck and neck in Chandler car sales during the past year, according to information received from the Chandler factory by the Peacock Motor Sales Co. of San Francisco, Northern California dealer for the Chandler. The result is a tie of 1,044 Chandlers sold in each city within a year's time, representing an annual business of over \$2,000,000 for each firm. The New York agency for this car surpassed this record by only a few cars.

Iles Becomes Hainsworth Sales Mgr.

C. P. Iles, of the Iles-Merrill Co., Tacoma, Wash., Oakland distributor, has sold out his interest in that firm and has become sales manager for the Hainsworth Motor Co., distributors in western Washington and British Columbia for the Oldsmobile.

Cole Over Fisk Seattle Branch.

W. B. Cole, formerly of San Francisco, Cal., has succeeded W. E. Bayless, resigned, as manager of the Seattle, Wash., branch of the Fisk Rubber Company.



"HEAP BIG MILEAGE CHIEFS."

In the accompanying illustration are shown some of the Savage tire sales force in attendance at a conference held recently at the Savage factory in San Diego, Cal. From left to right the men shown in the picture, are: J. W. Darrow, newly appointed manager of the Dallas branch; J. E. Shaw, sales assistant at the home office; A. E. Kelley, manager of the new Seattle branch; P. W. Rairden, general sales manager; J. G. Cochrane, assistant general sales manager; C. P. Turner, in charge of repair material sales; L. B. Watson, manager of the Cincinnati branch, and Claus Spreckels, vice-president of the company.

Portland-Vancouver Road Completed.

Two automobiles, one from Portland, Ore., and the other from Blaine, Wash., on the Canadian boundary, will cross the state of Washington, Sunday, Dec. 30th and will meet at Foster, near Seattle, as the big feature of the dedicatory exercises to be held on that date under the auspices of the Automobile Club of Western Washington, marking the completion of 112 miles of continuous paved highway between Portland and Vancouver, B. C. The machines, both Buicks, will carry official parties and will bear messages, one from the governor of Oregon and the other from the premier of British Columbia, to be delivered by the messenger to Gov. Ernest Lister of Washington.

More Armstrong Territory for Ross.

John J. Ross, 607 Figueroa Street, Los Angeles, Pacific Coast representative of the Armstrong tubes, manufactured by the Armstrong Rubber Co., of Newark, N. J., has had his territory increased until it now includes the States of Oregon, Washington, California, Idaho, Nevada, Wyoming, Utah and Arizona. These tubes, which are fitted with the Kahn automatic valve, created such a favorable impression at the Los Angeles show that Mr. Ross is still busy closing up business which originated there. Dunlop Tyres, which were also introduced into Southern California by Mr. Ross, are already appealing to a class of patrons which promises large results in the very-near future.

Cochrane is Savage Sales Aide.

J. G. Cochrane has been appointed assistant general sales manager of the Savage Tire Corp. of San Diego, Cal. He was one of the first salesmen for Chanslor & Lyon and acted as special sales representative for that firm for more than nine years. He was for two years Pacific Coast manager for the Hood Tire Co. and recently had charge of the Nash company's wholesale business in Southern California.

Ore. Dealers Ship Cars up Columbia.

Eastern Oregon automobile dealers are solving the freight shortage problem by shipping their cars from Portland to The Dalles, about 100 miles, by boat on the Columbia River, and from there driving them to Pendleton, La Grande and in one case, even to Baker.

Oregon "Road King" With Eling.

Harry Hays, widely known as the "road king" of Oregon, from the fact that for the past three or four years he has regularly traveled 18,000 to 20,000 miles each year through the state with a Buick car as territory man for

the Howard Auto Co., has been captured by H. H. Eling, Portland manager for Overland-Pacific, Inc. Beginning December 15, Hays became territory man for the Overland. To celebrate his first year with Overland-Pacific he is planning to raise his record of 20,000 miles for the season to 25,000 miles. The only man who has menaced Hays' title as "road king" so far has been Carl D. Shoemaker, state game warden of Oregon, who in eight months has traveled 13,000 miles in an Overland and has set 22,000 for his season's goal.

Carlisle Tire Branch in Portland.

The Pacific Tire & Rubber Co. has opened quarters in Portland to act as a factory branch for the Carlisle Cord Tire Co. J. G. Howell is president and M. F. Swift secretary-treasurer.

Stanley Steam Cars in Arizona.

The Arizona Steam Motors Co. of Phoenix, Arizona, has been incorporated to distribute Stanley Steam cars in their territory. Salesrooms and service rooms have been opened in Phoenix, and the managers of the company already report a lively interest in the the steam car, and are very optimistic about the business there.

Brooking Western Mgr. Bailey Co.

J. R. Brooking has been appointed Western manager, with headquarters in Spokane, for the Geo. D. Bailey Co., manufacturers of the Bailey Ball Thrust and Rayfield Coupling. Mr. Brooking was formerly with the Willys-Overland Co., Chanslor & Lyon and the Studebaker Corporation.

Crackel in Business for Himself.

George Crackel, one of the best known tire men in the West, was the guest of honor at a luncheon given at The Alexandria, Los Angeles, recently by fifty members of the staff of the B. F. Goodrich Co. Among those present was F. Richard Carroll, Pacific Coast manager for that company. During the luncheon, Mr. Crackel was presented with a handsome gold watch. He is leaving the Goodrich organization to enter business for himself, under the name of the "Akron Rubber Co.," at 1317-1319 South Hope Street, Los Angeles. In addition to handling pneumatic tires, the new concern will be distributors for Goodrich solid truck tires in Los Angeles, with the most completely equipped solid tire service station west of Chicago.

Manages Packard Sales in Portland.

Harry Twitchell has been appointed to succeed Captain W. H. Heylman of the John Doran Co., Packard dealer in Portland, Ore., as sales manager and secretary.

94,218 MOTOR CARS IN L. A. COUNTY

Leads California in Number of Registrations—Figures for Entire State Total More Than 301,000.

Figures that represent the growth of motor vehicle registrations in the state of California for almost the entire year 1917 show that there were 298,757 cars and trucks in the state on Dec. 16. Later unofficial figures for Dec. 28 increase this to 301,000. Nearly every one of the fifty-eight counties of California shows a large increase in the number of motor vehicles owned and operated within its boundaries. Among the counties leading in the number of cars and trucks owned, Los Angeles stands first with 94,218 motor vehicles on Dec. 16, an increase of more than 19,000 over the 1916 mark of 74,709. San Francisco county had 24,783 motor vehicles at the close of 1916; for Dec. 16, 1917, this has increased to 32,917, a growth of 8,134. Alameda county has 23,137 as against 15,997 for 1916. Aside from these counties whose large population assures them of a large numerical increase, Fresno county is remarkable for having increased its total registrations from 9,521 for 1916 to 14,264, an increase of approximately 66 per cent.

Sold an Elgin to an Alaska Man.

George L. Brush, Canadian representative of the Elgin Motor Car Corp. took an order at Vancouver, B. C., recently which surprised him. Mr. Brush sold an Elgin Six to H. L. Gould, of Dawson City, Alaska, for use in the Yukon district. Mr. Gould told Mr. Brush of the road-building activities around Dawson City, where it will be possible to motor out of the city very soon over a 50-mile stretch of road. The length of this roadway is to be 100 miles within the coming year. The Elgin Six, so far as is known, is the first touring car purchased for use in the Yukon district.

Armstrong Tube Agt. for S. F. Vicinity

John Jay Ross, of Los Angeles, Cal., distributor of Armstrong tubes for the Pacific Coast territory, has appointed Pryor's Auto Accessories Co., 45 Fourth St., San Francisco, to distribute Armstrong tubes in the counties of San Francisco, Alameda, Contra Costa, Marin, San Mateo and Santa Clara.

A B C Distributors for California.

The California Sales Co., Los Angeles, Cal., will distribute A B C starting and lighting systems throughout California, Arizona and Nevada.

OREGON WORKING ON PACIFIC HWY.

State Highway Commission Plans to Make It All-Winter Road—Trans- State Motorists Now Ship Cars.

Oregon and Washington are now definitely shut off from motor car travel to California until next spring. The winter rains, setting in early in December, have made the notorious Pass Creek Canyon section of the Pacific Highway in Douglas county, Ore., absolutely impassable to automobiles. Construction work on this section of the highway has made it even worse than usual in winter, for the contractors have put in two or three miles of dirt fill that is bottomless after a rainfall. These fills will be rocked by next spring.

In the meantime, the Oregon State Highway Commission is making rapid progress towards its objective of making the Pacific Highway an all-winter road, except for the brief period when the Siskiyou will be closed on account of snow, by next autumn. One of the worst obstacles to an all-year highway will be removed with the reconstruction and rock surfacing of the Pass Creek Canyon section next spring.

The Commission either has crews working or has let contracts for re-grading and rock surfacing of Cow Creek Canyon, another terror for motorists; Wolf Creek hill, in Josephine county, with its 20 per cent grade that has brought death to several automobile passengers; and Roberts Mountain, in Douglas county, on which several fatalities also have occurred. All these are on the main Pacific Highway.

With the closing of automobile travel between California and the northwest, motorists bound from the northwest to California or vice versa must ship their cars.

Knight Engine Inventor a Visitor.

Charles Y. Knight, inventor of the famous Knight sleeve-valve engine, was a recent visitor to Los Angeles, Cal., where he was the guest of Lynn C. Buxton, distributor of Stearns-Knight cars for the southern part of the state. He will spend the winter season residing in Pasadena.

Pearson Supervises Coast Chalmers.

George Pearson, Jr., former manager of the motor truck department of the Maxwell Motor Co., Inc., of Detroit, has been appointed Pacific Coast supervisor for the Chalmers Motor Co. His territory will include ten Western states.

Will Build Trucks in Nevada.

A gasoline engine, designed for motor truck use, which has but two cylinders but is claimed to produce 60 horsepower, is the invention around which Fred I. Standiford, the inventor, proposes to build up a motor truck manufacturing business in Carson City, Nev. The Standiford engine consists of seven working parts, as compared with 47 working parts on the Ford power plant, and has no valves. Standiford's confidence in his invention as a notable contribution to the truck engine field has taken form in the organization of the Standiford Motor Corp. under Nevada laws, with himself as president and J. A. Spear as secretary.

Emerson, of Olds, Visits Coast.

P. L. Emerson, sales manager of the Olds Motor Works, Lansing, Mich., has returned from a visit to the Pacific Coast region, during which he visited the principal dealers of Oldsmobiles with the intention of securing first-hand information as to trade conditions. The Olds company will be guided by his report when making its allotment for Pacific Coast demand during the coming season.

Denby Sales Mgr. Tours Coast.

M. E. McKenney, sales manager for the Denby Motor Truck Co., Detroit, recently returned from a tour of the Pacific Coast. McKenney visited the recent Los Angeles show and then traveled northward, visiting all the large distributing centers along the Coast.

Montana Has 52,696 Cars.

Nearly twice as many motor vehicles were registered in Montana this year as last, according to the annual report of the Secretary of State. The report shows that in 1916, 25,549 motor vehicles were registered and this year 52,696. The total receipts of the automobile registration department this year were \$295,207.70 and the expenses \$27,750.10, leaving a net income of \$267,457.55.

G. M. C. in S. F. Changes Hands.

The San Francisco, Cal., branch of the General Motors Trucks Co., which heretofore has been directed by W. G. Cochrane, has been bought by Harrison B. Smith of San Jose. It is reported that the purchase was made for well known and financially strong interests in the Pacific Coast territory, with whom Smith is identified.

Moon Car Agency in Utah.

R. B. Baker and R. T. Dennis, partners in the Lincoln Garage, Salt Lake City, Utah, have taken the agency for the Moon car in the state of Utah.

REPUBLIC TRUCK TO ASSEMBLE IN L. A.

Equipment of New Coast Factory Will Be Ready Some Time This Month— To Turn Out 2,000 Trucks Yearly.

The Republic Motor Truck Co., Alma, Mich., will start the assembling of equipment for its new Pacific Coast branch located near Los Angeles, some time in January and immediately following the arrival of F. W. Ruggles president of the Republic company. It is estimated that the cost of this equipment for the assembling of Republic trucks will cost about \$100,000. According to George W. Moore, treasurer of the company and who recently returned east after a ten-day visit in Los Angeles, the new plant will be placed in charge of D. F. Poyer, now Republic truck distributor in the southern part of the state. According to Poyer, about 100 men will be employed in the new assembling plant and about 2,000 Republics will be turned out during the first year of the Coast branch's existence. Factory figures show that more than 1,000 of this make of truck has been distributed throughout California. The Los Angeles branch will assemble trucks destined for distribution on the Pacific Coast, Mexico, South America, the Hawaiian Islands and the Far East.

Picard Finds Cal. Prosperous.

Increased prosperity is everywhere evident in California, is the opinion formed by A. J. Picard, of A. J. Picard & Co., New York City, distributor of Genemotor systems, as the result of his recent tour around in the United States, which took in California. Significant, he considers, of prosperity, which is always attended by rising prices, is the fact that oranges in California which formerly sold for a song now bring prices much nearer to Eastern prices than ever before.

Western Manager for Bailey Bearings.

J. R. Brooking has been appointed Western district manager for the Geo. D. Bailey Co., manufacturers of Bailey ball thrust bearings and Rayfield couplings. His headquarters will be in Spokane, Wash. Brooking is well known on the Pacific Coast through his connection with the Willys-Overland, Chanslor & Lyon and Studebaker organizations.

Lalley-Light Around Spokane.

The W. C. Garbe Motors Co., Spokane, Wash., has taken the agency for the Lalley-Light.

New York Ready for 18th Annual Automobile Show

Return of Confidence in the Industry Will Be Reflected in the Greatest Exhibition of Motor Cars and Accessories Ever Held in the World—It Is Conceded Now That the War Will Benefit the Automobile Business

By F. Ed. Spooner.

NEW YORK CITY, Dec. 27.—The opening of the Eighteenth Annual Automobile Show promoted by the National Automobile Chamber of Commerce in the Grand Central Palace, this city, on the evening of Saturday, January 5, will witness exhibits greater in number and more comprehensive than those of any previous show, while the attendance of members of the trade promises to far exceed that of former years. Every New York hotel is booked to the doors, and more hotels have been made headquarters for the manufacturing companies than in any previous year. That attendance records will be broken is felt to be certain. The agitation against holding shows during the present days of the great world's war came to nothing, and it is just as well that this is so.

With the success of the New York Show, and of the event at Chicago, will come a renewal of confidence taking the place of the doubt and pessimism of the last few months. Those of an optimistic turn of mind—and this includes the men who carefully analyze every move in the automobile field, and who at no time are alarmists—have never had the slightest doubt regarding the success of the national shows. These gentlemen have gone along on an even keel, and have predicted with confidence that the atmosphere would change decidedly with the coming of the national shows. This confidence of the optimists has not been misplaced. Even the pessimists will agree before the close of the New York show, that they were wrong in predicting disaster for the industry in holding the annual event. The disaster would have come from a cancellation of the plans. There are too many members of the trade who entered the motor car manufacturing field from the bicycle field to permit of the automobile industry repeating the errors of the past. It is agreed generally among the veterans of the old days of the wheel that cycling dropped out when the manufacturers discontinued the annual shows, racing of a national character, and liberal advertising in the daily press and in the trade publications. Quite naturally these gentlemen do not care to see the mistakes of their earlier career repeated.

During a recent trip which the writer took through the territory from Chicago to New York, and points in New England, New Jersey, and Pennsylvania, there was a noticeable return of confidence. In fact, the old days of doubt and pessimism were giving way to something not at all unlike optimism for the future of the trade. With this condition prevailing, the success of the New York show and of its sister, the Chicago National Show, will prove the deciding factor, and we shall doubtless see a complete return to conditions as they existed prior to the inauguration of that campaign of German propaganda which came out of Washington, and which is reported to have resulted in the apprehension of four-pro-German newspaper men, who were conducting a news bureau, and presumably scattering broadcast the alarming articles which more than anything else caused the arousing of doubt and pes-

simism to a point where the automobile business was really trembling in the balance.

With the stopping of this news source by the dispatch which came out of Washington, stating that there was nothing the matter with the automobile business, that the manufacturers would be able to secure material and that motorists would not be curtailed, for some time at least, in the use of gasoline, and with the meetings of the manufacturers of the motor and the accessory field, and of the motor car manufacturing industry held in Detroit, the atmosphere cleared. The confidence of the makers returned, and it is gradually entering the brains of the tradesmen and garagemen that they have been misled and that their business is sure.

When a dog is licked he puts his tail between his legs. Some members of the motor car trade have been not at all unlike the dog. This is the testimony of the writer, who interviewed prominent makers, prominent members of the retail trade, and men connected in many capacities with the motor car industry during a trip of several weeks recently completed. They were licked because they had no confidence. The success of the national shows will restore confidence to the rank and file, and those whose optimism has always been present will have their good judgment verified.

With the New York show and the coming Chicago show, all eyes will turn to the Far West, as is natural. It may be that there will be a letting up of buying for a time in some sections of the East, where the agitation for conservation is most heard, and where the car owners will continue to use their old cars until there has come a return of confidence, and the general prosperity which is bound to come from the war has been generally felt; but buying in the West will go on without cessation, as the West is known to have money through the high prices secured for its crops, and the West is always a good spender. A lack of confidence in the East among the manufacturers will affect that vast territory covered by "Motor West" because, when the manufacturers do not make cars, the dealer and garageman of the Pacific Coast and of the far Western states on the other side of the Rockies, is the sufferer through inability to secure goods. Therefore, the success of the New York show and of all shows held in the East must be good news to the people of "Motor West" territory.

The motor car business problem has resolved itself almost entirely to the selling end; in other words, the retail situation. The dealers of the country have been up against a wave of patriotic hysteria to economize by the purchase of only the "absolute essentials" of life. Now, however, it is becoming evident that economy can be carried to such an unnecessary extreme as to so cripple business, and to lessen and even destroy its ability to help the prosecution of the war through taxes on profits and the purchase of Liberty bonds. In a word, the well-to-do are

List of Exhibitors at the New York National Show

COMPLETE CARS.

Abbott Corp.
Allen Motor Co.
American Motors Corp.
Anderson Electric Car Co.
Apperson Bros. Auto Co.
Auburn Automobile Co.
Austin Automobile Co.
Baker & L. Co.
Briscoe Motor Corp.
Buick Motor Co.
Cadillac Motor Car Co.
Camden Motors Corp.
Case, J. I., T. M. Co.
Chalmers Motor Co.
Chandler Motor Car Co.
Chevrolet Motor Co. of Mich.
Cole Motor Car Co.
Columbia Motors Co.
Comet Automobile Co.
Crow-Elkhart Motor Co.
Davis, Geo. W., Motor Car Co.
Detroit Motors Co.
Doble-Detroit Steam Motors Co.
Dixie Motor Car Co., Inc.
Dodge Brothers.
Dort Motor Car Co.
Elgin Motor Car Corp.
Elkhart Carriage & Motor Co.
Empire Automobile Co.
Fiat Automobile Co.
Franklin, H. H., Mfg. Co.
Grant Motor Car Corp.
Hal Motor Car Co.
Harroun Motors Corp.
Haynes Automobile Co.
Hudson Motor Car Co.
Hupp Motor Car Corp.
Inter-State Motor Co.
Jackson Automobile Co.
Jordan Motor Car Co.
King Motor Car Co.
Kissel Motor Car Corp.
Kline Car Corp.
Lewis Spring & Axle Co.
Lexington-Howard Co.
Liberty Motor Car Co.
Malbohm Motors Co.
Maxwell Motor Corp.
McFarlan Motor Co.
Mercer Automobile Co.
Milburn Wagon Co.
Mitchell Motors Co., Inc.
Moline Automobile Co.
Monitor Motor Car Co.
Monroe Motor Co.
Moon Motor Car Co.
Moore Motor Vehicle Co.
Mutual Motors Co.
Nash Motor Co.
National Motor Car & Vehicle Corp.
Nordyke & Marmon Co., Inc.
Oakland Motor Car Co.
Ohio Electric Car Co.
Olds Motor Works
Owen Magnetic.
Packard Motor Co.
Paige-Detroit Motor Car Co.
Paterson, W. A., Co.
Peerless Motor Car Co.
Pierce-Arrow Motor Car Corp.
Premier Motor Corp.
Regal Motor Car Co.
Reo Motor Car Co.
Roamer Motor Car Co.
Saxon Motor Car Corp.
Scripps-Booth Corp.
Standard Steel Car Co.
Stanley Motor Carriage Co.
Stearns, F. B., Co.
Studebaker Corp. of America
Stutz Motor Car Co. of America.
Templar Motors Corp.
Vellie Motors Corp.
Westcott Motor Car Co.
Willys-Overland, Inc.
Winton Co.
Woods Motor Vehicle Co.

ACCESSORIES.

A-B-C Starter Co.
Adams & Elting Co.
Adams-Williams Mfg. Corp.
Alexander, J., Mfg. Co.
Amazon Rubber Co.
American Bronze Co.
American Ever Ready Works.
American Sleeve-Valve Motor Co.
Anderson Forge & Machine Co.
Armstrong Cork Co.
Armstrong Rubber Co.

Arrow-Grip Mfg. Co.
Art Metal Works.
Asch & Co., Inc.
Atherley, R. J.
Au-To Compressor Co.
Auto Gear Co., Inc.
Automatic Carbon Eliminator Co.
Automatic Transmission Co., Inc.
Automobile Devices Co.
Auto Parts Mfg. Co.
Auto Pedal Pad Co., Inc.
Barnes Foundry Co.
Becker Bros.
Benford Mfg. Co.
Black & Decker Mfg. Co.
Breeze Mfg. Co.
Brewer-Titchener Corp.
Brunner Mfg. Co.
Buda Co.
Budd Mfg. Co.
Byrne, Kingston & Co.
Campbell, A. S.
Carburetor Mantle Co.

Faw, J. H., Inc.
Findessen & Kropf Mfg. Co.
Foot Air Accelerator Co.
Frassie, Peter A., & Co., Inc.
Fryer-Auster Co.
Fulton Co.
Gabriel Mfg. Co.
Gemco Mfg. Co.
G. L. W. Spring Oiler Co.
Gould Storage Battery Co.
Gray & Davis, Inc.
Grossman, Emil, Mfg. Co.
Guarantee Liquid Measure Co.
Hale & Kilburn Co.
Halladay Co., L. F.
H. & D. Co., Inc.
H. & N. Mfg. Co.
Harrison Radiator Corp.
Hart-Bell Co.
Hartford, Inc., Edward V.
Hassler, Robt. H.
Hayes Mfg. Co.
Hayes Wheel Co.
Heinze Electric Co.
Heinze, John O., Co.

Martin, James
Marvel Accessories Mfg. Co.
Menominee Electric Products, Inc.
Merchant & Evans Co.
Merrimack Mfg. Co.
Metal Stamping Co.
Militaire Motor Vehicle Co.
Miller, Chas. E.
Miller Transmission Co.
Moreau & Pratt, Inc.
Morae Chain Co.
Mosler & Co., A. R.
Motor Car Equipment Co.
Motor Car Spring Co.
Moto-Meter Co., Inc., The
Mutt, L. J., Co.
National Carbon Co.
New Era Spring Co.
Nugo Device Corp.
Otis Elevator Co.
Pantasote Co.
Parker Rust-Proof Co. of America.
Parry Mfg. Co.
Peters & Herron Dash Co.
Petty, N. A.
Philadelphia Storage Battery Co.
Phillips-Brinton Co.
Piel Co., The G.
Play-Safe Co.
Pouvaill-Smith Corp.
Pratt Mfg. Co., W. E.
Primolite Sales Co.
Prismolite Co.
Rand Mfg. Co.
Raybestos Co., The
Rex Mfg. Co.
Rich, H. C., Auto Accessories Co.
Rives Never-Slip Auto Pedal Co.
Rowe Calk Co.
Saferlite Co.
Sales Service Co.
Schrader's Son, Inc., A.
Shakespeare Co.
Shaler Co., C. A.
Sharp Spark Plug Co.
Simmons Mfg. Co.
S K F Ball Bearing Co.
Smith Signal Corp.
Sparks-Withington Co.
Speer Carbon Co.
Spencer Metal Products Co.
Splitdorf Electrical Co.
Standard Welding Co., Division Standard Parts Co.
Standard Woven Fabric Co.
Stanley, John T., Co., Inc.
Sterns Tire & Tube Co.
Stewart-Warner Speedometer Corp.
Stewart, F. W.
Story Corp.
Stromberg Motor Devices Co.
Stroock, S. & Co.
Sunderman Corp.
Superior Lamp Mfg. Co.
Syracuse Malleable Iron Works
Taft-Pierce Mfg. Co.
Tite-Flex Metal Hose Corp.
Triple Action Spring Co. of N. Y., Inc.
Tri-Ton Trailer Corp.
Twin-Fire Spark Plug Co.
U-Auto-C Corp.
Union Truck Mfg. Co., Inc.
United Engine & Mfg. Co.
U. S. Air Compressor Co.
U. S. Gauge Co.
Universal Shock Eliminator, Inc.
Universal Tool Co., Inc.
Vacuum Oil Co.
Van Sicklen Co., The
Veeder Mfg. Co., The
Voorhees Rubber Mfg. Co.
Waltham Watch Co.
Warner Lenz Co.
Watson Piston Ring Co.
Water Gas Carburetor Co.
Weaver Mfg. Co.
West Side Foundry Co.
West Steel Casting Co.
Wheeler-Schebler Carburetor Co., Inc.
Willard Storage Battery Co.
Wilson & Co.
Wilson Body Co.
Wire Wheel Corp. of America.
Woodworth Mfg. Co., The
Zenith Carburetor Co.



GRAND CENTRAL PALACE, WHERE THE NEW YORK NATIONAL SHOW WILL BE HELD.

Carmm Universal Auto Body Co.
Century Plainfield Tire Co.
Chadick-De Lamater Corp.
Challoner Co.
Champion Ignition Co.
Clark Equipment Co.
Coe-Stapley Mfg. Co.
Comfeld Tire Protector Co.
Common-Sense Mfg. Co.
Connecticut Clock Co.
Corbin Screw Corp.
Corcoran-Victor Co.
Corning Glass Works
Cowles & Co.
Cox Brass Mfg. Co.
Crew Levick Co.
Curtis Pneumatic Mach. Co.
Dann Products Co.
Detroit Kerosene Carburetor Co.
Detroit Pressed Steel Co.
Dixon Crucible Co.
Doehler Die-Casting Co.
DuBois Piston Ring Co.
Eastern Rubber Co.
E. A. Laboratories, Inc.
Eclipse Machine Co.
Eiseman Magneto Co.
Electric Storage Battery Co.
English & Merick Co.
Ericsson Mfg. Co.
Essenkey Rim Compressor Co.
Essex Rubber Co.

Hers & Co.
Holmes, Geo. L.
Hologhane Glass Co.
Holt-Welles Co., Inc.
Hoover Tire Carrier Corp.
Houper Machine Co.
Humboldt Machine & Stamp- ing Co.
Improved Gauge Mfg. Co.
International Coat Co.
Inter-State Electric Co.
J. & B. Mfg. Co.
Jannay, Steinmetz & Co.
J. H. Tonneau Shield Co.
Jiffy Jack Co.
Juhass Carburetor Co.
Kales Stamping Co.
Kellogg Mfg. Co.
Kent Mfg. Works
Keystone Rubber Mfg. Co.
Klaxon Co.
K-W Ignition Co.
Lacharnay Carburetor Co.
Lane Bros. Co.
Langlands, Eric.
Le Compts Co., Geo. W.
Light Mfg. & Foundry Co.
Lipman Air Appliance Co.
Lowe Motor Supplies Co.
Lubriko Co.
Macbeth-Evans Glass Co.
McQuay-Norris Mfg. Co.
Mann Co., F. W.
Many-Use Oil Co.

stopping to wonder whether bed-rock economy is not misdirected patriotism, and whether patriotism demands the denial of up-to-date transportation, or even such conveniences of life as motor cars. There is a feeling in the trade that sober reflection will soon cure this hysteria.

There are not a few big men in the industry who believe that something pretty close to a business war boom such as has come to Canada, and to some extent to England, will reach America within 90 days, or at least by late spring or early summer. It is argued that billions of dollars will be set in circulation by the spending by labor of some of its largely increased wages. It is pointed out besides that, many billions more will come into the pockets of war munition and supply makers through payments to them by the Government when more universal deliveries shall begin to be made.

Transportation problems are the one real fly in the ointment. The makers during the winter are up against the real problem of their lives to get their cars into the hands of the dealers. They are up against another problem to secure supplies. To make their exhibits at the New York show, Detroit manufacturers were compelled to ship their cars by express Friday, December 21, or not reach the show at all. Express shipments today take almost as long as was taken in shipping by freight a few months ago. This is the statement of a well-known maker. This situation does not, of course, apply to the Far West, as freight cars in immense numbers are going west to bring back the remarkable products of the states west of the Rocky Mountains to supply the needs of the East. These cars are going out filled and coming back filled, as a matter of course, and embargoes placed upon shipments in every other direction are seldom in force to the Far West. For this reason, the makers are today looking for markets in "Motor West" territory, and securing them. The records of California show nearly normal business even at the present time, and indications are for an ever-increasing business in the future—and this may be said of all states covered by "Motor West" circulation.

Dealers who are attending the New York show are beginning to consider the matter of meeting reduced sales through their inability to secure transportation in the East, and are making arrangements to combine with their passenger car business a motor truck business, taking agencies for motor trucks manufactured in the same city in which the passenger car they handle is built. Through this combination of interests, they will combine drive-aways and carry the passenger cars on motor trucks, making one driver responsible for two deliveries. The dealers are alive to this prospect and this sort of delivery has already started in the East, even in the face of a severe winter.

The belief is growing that the National Automobile Shows will not only give support to the dealers but also inspire in the public at large business confidence just as did the show that was held at the start of the European war. Exhibits for the New York show were rushed early and many were booked to points outside New York such as Yonkers and Kingsbridge, and then driven into New York over the road and stored.

It may be said that there is now a conviction that the passenger car trade is going to be more prosperous than ever. There is the utmost confidence in the committees of automobile men appointed by the Government. It is

the purpose of these men to ascertain which car factories will best be able to take over war orders, and to investigate the steel supply. The reduction, if any, in the passenger car output will be due to the fact that some of the larger motor car factories will take on war orders and in that way bring about a reduction of the passenger car output.

Orders to about 50 per cent of their capacity have been taken by several of the larger manufacturers. It is claimed that these war orders will merely mean the increasing of the size of the plants and that all demands for motor cars will be met insofar as the material situation will allow. It seems highly probable that all cars desired will be manufactured, and the optimists, who have not been wrong thus far, and who are not likely to overreach themselves, believe that there will be a car for everyone. Those companies which assemble their car complete, and which have little or no machinery through depending on specialists to build their components, will naturally not be affected by war order conditions, and as many of these companies patronize smaller parts making companies, they will be able to increase output to meet demand.

Every effort has been made to make the Eighteenth Annual New York show brighter and prettier than ever, and the displays of cars are the most magnificent ever seen. There are many new features, which are proving attractive and there are many new models. The number of brand-new companies exhibiting for the first time is very noticeable by its absence. Companies which exhibited last year for the first time, have, many of them, gone on the rocks during the stress of the past year. In spite of this absence of new things in the car line, every inch of space in the Grand Central Palace is taken, and the display is magnificent and on a magnitude never known before, as Manager Miles by clever work succeeded in increasing the amount of floor space available in the limited walls of the big building.

More Than 300 Models Will Be Represented.

An array of more than 360 new, glistening models of automobiles, ranging all the way from tiny runabouts selling for a few hundred dollars to the largest, roomiest limousines costing more than \$5,000 will be shown. Among the exhibitors are several makes of electric cars and steam cars.

The exhibits will include cars meeting every purse, but of necessity due to the increased cost of material and labor, the percentage of low-priced cars will be markedly lower than in 1917. Last year about 10 per cent of the models (not production) sold for under \$750. This year just slightly under 6 per cent of the models on the market will sell under this mark. An indication of the price changes is provided by recently compiled statistics which show that 21.6 per cent of the 1918 models will list for under \$1,000. Last year this price class represented 27.7 per cent of the models. A man desiring to spend between \$1,000 and \$2,000 for a car this year will have 49 per cent of the models on the market to select from, while last year he had 53.6 per cent. Carrying the classification still further to the cars for over \$2,000, one finds that the 1917 and 1918 percentages are 18.7 and 29.4, respectively.

Each year the scope of the accessory exhibits expands. Thousands of little attachments that are designed to add to the economy and comfort of automobile maintenance will be displayed on the upper floors of the Palace and this

year, especially, the show visitor will be impressed by the extent to which the manufacturers of accessories have gone in producing devices that tend to make the operation of a motor vehicle a more economical proposition.

Conservation will attract more attention than ever before; as, for example, heaters for the carburetor or the supply pipe or the air inlet do much to make the fuel vaporize more fully and so insure its proper burning and development of the power that is in it. These vary from an electric coil in the carburetor bowl or manifold to a complicated stove heated by the exhaust from the engine. Never before has there been such a variety of this type of improvement. And it is most timely, for while we still have ample fuel to take care of our needs even in war times we are at the point where wastefulness is culpable.

It is also being recognized that there is no advantage from saving fuel if the heat produced is wasted instead of being used. So we find an ever-increasing number of devices for preventing over-cooling of the engine. Thermostats in the water pipes to slow down the circulation as the water gets cooler; shutters in front of the radiator to shut off the air draft when not wanted; fan regulators to speed up the fan when needed; water pumps that only pump when hot, and similar devices are now being used to keep the cylinders working hot and yet prevent them from becoming too hot. With modern fuels the cool walls of the cylinders condense the heavy fuel parts and send them down to the crank-case, where they are wasted so far as being burned is concerned, but where they also become a danger because they spoil the lubricating oil and may result in ruined bearings.

Not in the engine only are improvements being made, but the various details of the car body and frame and even the tires have come to be objects of interest in their relation to less fuel. Tires, now more than ever before, are pliable and flexible and the sort that roll over the road easily; "highly resilient" they are called. Frames are deeper and lighter for a given strength. Bodies are being made better and lighter; and much improvement may yet be made in them. The tendency for the wheels to grow larger each year seems to have expended itself, and with the increased number of good roads wheels of medium size save some cost and weight and seem quite satisfactory.

The stream lines which in the past have been developed because they affect speed now are recognized as equally good in saving fuel because at any considerable speed they greatly reduce the head resistance to the air. The "one-man top" now so universal are more often seen down than in the past and this practice saves air resistance and fuel. Inclined windshields throw the air upward and over the rider's head with very slight resistance and are in common use. The self-starter saves fuel by permitting the engine to be stopped whenever the car is not running instead of idling to avoid the cranking labor. Front mudguards which turn down well in front of the wheels deflect the air up and over the wheel instead of allowing it to strike and retard the rapidly moving wheel tops, and this results in appreciable saving of fuel. In these and many similar ways the thought of the time is expressed in the construction of the cars and will add greatly to the interest in the exhibits at the show.

The passenger cars are for the most part finished to give constant service. Tops or enclosed bodies protect both driver and passengers so that their service is rendered

regardless of weather just as certainly and regularly as the trolley or train. They are likewise more convenient as well as not greatly more expensive. In fact, if several people are to be transported, the cost is often far less than that of using the trains.

As the most important barometer of automobile design and construction, the show will demonstrate that the 1918 car shows very little change mechanically over that of 1917. What changes have been made, as was the case last year, will chiefly be in the nature of minor refinements. Perhaps the most interesting feature of the show to the person giving attention to design tendencies will be found in coach work.

Plans for the annual dinner of the Motor and Accessory Manufacturers Association, is to be held on Wednesday, January 9, at the Waldorf at 7:30 p. m. It will be a war dinner with a war menu, with no speeches whatever. About 500 of America's leading accessory men will participate in this annual affair of the Association. No alcoholic liquors will be served at the dinner nor will any of the diners be permitted to order them.

Motor Truck Makers to Meet in Convention.

Manufacturers of motor trucks will meet in convention during the show in the Board Room of the National Automobile Chamber of Commerce, beginning at 10 a.m., Tuesday, January 8th. The purpose of the convention, as outlined by the Commercial Vehicle Committee, which has issued the call, is as follows:

First—Service to the Government, co-operating with its motor truck program.

Second—Service to the Government in assisting to relieve the railroad congestion by the use of motor trucks.

Third—Service to the Motor Truck industry so that manufacturers may better understand the demands to be made upon them and be better prepared to meet them.

There will be papers by men prominent in the industry and in the Government, which should be of keen interest to motor car manufacturers, while the discussions should be highly educational. Among the papers scheduled are the following:

"Co-operative Delivery with Motor Wagons," by A. W. Shaw, chairman Commercial Economy Board, Council of National Defense.

"Motor Trucks in Short Haul Work," by Geo. H. Pride, president Heavy Haulage Company, New York.

"Delivering Army Trucks by Highway," by Brig. General Chauncey B. Baker, Quartermaster's Department, U. S. A.

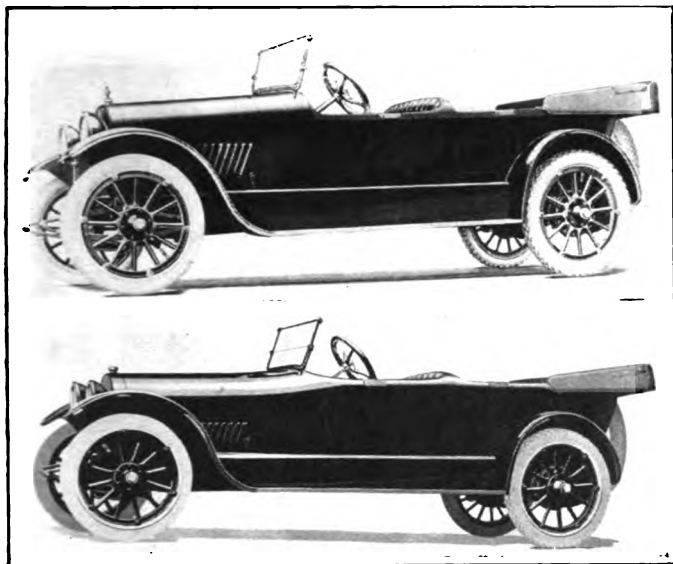
"Work of the Highways Transport Committee," by Roy D. Chapin, chairman.

"Highways for Heavy Haulage," by Henry G. Shirley, chief engineer Maryland State Road Commission, Baltimore, Md.

"Legislation Affecting Use of Motor Trucks," by J. T. Roche, vice-president Locomobile Co. of America.

"Maintaining a Record of Unselfish Co-operation," by George M. Graham, manager truck department Pierce-Arrow Motor Car Co.

Others invited to attend include H. L. Horning, Automotive Section, War Industries Board; Christian Grl, Director of Production, Military Truck Division, Quartermaster's Corps, U. S. A.; Alexander W. Copland, Hugh Chalmers and John R. Lee, of the Automobile Industries Committee; and Logan Waller Page, Director Office of Public Roads, Department of Agriculture.



(UPPER) JACKSON VALVE-IN-HEAD EIGHT FOUR-PASSENGER FLYER. (LOWER) JACKSON FIVE-PASSENGER TOURING.

Six Body Styles in Jackson Line

No Mechanical Changes in the Company's Valve-In-Head Eight—Flyer Model This Year's Leader

THE new 1918 Jackson line will consist of six beautiful new body styles. The regular five-passenger touring car is priced at \$1495; four-passenger flyer at \$1575; four-passenger Cruiser, at \$1495; two-passenger roadster at \$1495; seven-passenger touring at \$1570, and seven passenger Jackson Springfield Sedan at \$2195. Mechanically, the Jackson Valve-In-Head Eight will be the same as the past year, with the exception of a few minor improvements. The leader of the line this year is the Flyer model, which is built on the long and low racer type.

The Sedan model is of the Springfield type, and is built in the Jackson coach shops, where all Jackson bodies are built, under the regulation Springfield patterns. This model is a most practical year-round car. One minute it is an open touring car, and in a few minutes it can be changed into a closed Sedan with the occupants entirely protected from the elements. Although it is a Springfield type, it is built complete in the Jackson coach shops.

The seven passenger touring model is most unusual. It has a graceful sweeping line from the radiator cap to the end of the slip-cover.

The four-passenger Cruiser model is one of the smartest cars of this type now on the market; at the same time there is ample room for four passengers comfortably. The side body line dropping in a gradual slant from the cowl to the rear, makes this four passenger Cruiser model a most snappy car.

The Jackson two-passenger roadster possesses lines of distinguished and dignified beauty. The splendid balance and harmony of line in this two passenger roadster marks it instantly as a smart and rakish two-passenger car.

The Jackson five-passenger touring car is a modification of the seven-passenger body, built on more conservative lines. It possesses lines of unusual grace.

The specifications of all Jackson models include the eight-cylinder 48-horsepower motor, with both cylinder blocks and crank-case in one unit, and with 3-inch bore and 3½-inch stroke; Zenith carburetor, with separate mixing chamber, independent exhaust and muffler for each cylinder block; variable force-feed lubrication system, with supply of oil governed by throttle opening. The Stewart vacuum system raises the fuel from the 18-gallon

tank at the rear to the carburetor. The Electric Auto-Lite starter, applied through Bendix drive to the fly-wheel, is entirely inclosed; ignition and lighting systems are also of Auto-Lite construction. Wheelbase is 118 inches; tread, 56 inches, and the tire equipment is 34x4 all around. Standard equipment includes one-man top, sloping rain-vision windshield, Stewart speedometer driven from transmission, Stewart tire pump attached to transmission and operated through foot-board, lock for ignition and lighting switch, dash light, electric horn, oil-pressure gauge, ammeter, Detroit demountable rims, foot rail, coat rail, tools and jack. Special equipment on the four-passenger Flyer model includes eight-day clock, Moto-meter, tonneau light, cigar lighter and choice of color scheme at no extra charge.

Harroun Announces a Military Roadster

A new body type, which has been recently announced, is the Harroun Military Roadster—a car specially designed and constructed to supplant larger, heavier cars in the use of owners who take a patriotic pride in efficiency, but who are, at the same time, insistent on good looks and high quality.

No expense has been spared in the materials and workmanship which enter into the body of the Harroun Military Roadster. The finish is blue-black gun metal, satin-surface. Upholstery is of No. 1 grade hand-buffed leather. Marshall cushion springs add to the comfort of the low, tilted seats. A khaki top with snugly-fitting curtains is standard equipment.

Especial attention has been paid to the location of the control levers, which, while well out of the way of entrance or exit, are handily in reach.

The usual door pockets are but a small part of the carrying space provided in the car, which has two large parcel compartments in the seat back and a locker on the rear deck large enough to take care of two suit cases and other baggage. The extra tire or wheel is carried at the rear.

The provision of such a body with the standard Harroun chassis opens an alluring possibility for fuel and tire economy. In this field the Harroun touring car has already scored such sensational performances as 49.6 miles to the gallon on the Indianapolis Speedway, and 64.4 miles to the gallon on Detroit streets and adjacent roads.

The moderate wheel-base permits unusually short turning radius, which, coupled with Ray Harroun's original application of the cantilever rear spring, combines ease of handling with a degree of passenger comfort new to the popular-priced field.

The radiating oil cooler, spring-spoke steering wheel, racing-type motor, freeze-resisting radiator and other exclusive Harroun features are all incorporated in the Military Roadster.

Gasoline supply is in large tank, hung at the rear and feeding through a vacuum system. The supply—approximately 10 gallons—will, the manufacturers declare, be sufficient for from 200 to 300 miles.



THE NEW HARROUN MILITARY ROADSTER.



THE VIEW WHILE DESCENDING THE NORTH SLOPE OF GAVIOTA PASS IS MARVELOUSLY BEAUTIFUL.

Road Work in Ventura and Santa Barbara Counties

How Ventura County Got a Good Roads Bargain—Outline of the Work Done and That to be Accomplished—Santa Barbara Roads Much Frequented by the Millionaire Class—War Interfering With Highway Work in Both Counties

A LONG TIME ago some gentleman with an observing mind remarked that it was an ill wind which blew nobody good. He could find ample confirmation today for his famous utterance if he took the trouble to inquire into the manner in which the evil hurricane of the great war affected the affairs of Ventura county, California. The black gale of wrath and destruction that has been sweeping the Elder World for the past three years has proved merely a golden zephyr to the fortunate dwellers in Ventura county. A million dollar set of good roads that probably could not be duplicated in the next three years for double the money, and a veritable flood of gold for her chief item of farm produce, the bean, have so far been the two chief results of the war as far as Ventura county is immediately concerned.

So many and so grievous have been the stories of less fortunate communities in their struggle to obtain good roads that the history of Ventura county's million dollar set of concrete roads, bought at bargain counter prices, is particularly refreshing.

Never, before or since, was a good roads bond issue so timely as that of Ventura. Whether it was courage or good fortune that led Ventura to vote her million dollars

at just the psychological moment does not matter. At any rate her money became available at a time wonderfully opportune. Southern California was in the grip of the uncertainty that the first year of the great war plunged almost every Western community. Everywhere was retrenchment;—many big jobs that had been planned were postponed. The State of California was just spending the last of its \$18,000,000 derived from the first good roads bond issue. There was another bond issue in sight, with every prospect that it would carry. The big contractors who had been doing much of the state road work were eager to find jobs that would enable them to keep their organizations together until the next state bond money was available.

Naturally, when Ventura County stepped up to the counter with her million dollars in hand and asked for something like 106 miles of good roads, she found some eager bidders. And the shrewd men in charge of the building of her highway system were not slow to grasp the situation. They had promised the people that the million dollars would build approximately 75 miles of concrete road, and 31 of oil macadam. But instead of the bids they called for exceeding their estimates, they ran far below. So far.

indeed, that they found themselves able to order the entire 106-mile system to be built of concrete. How some of the contractors fared on their bids is another story, but there are very few people in the world who have time to shed tears over the woes of contractors.

If you would visualize the good roads system that Ventura county now has approximately 90 per cent completed, imagine the palm of your right hand laid upon the city of Ventura, with thumb pointing to the north. Your thumb, then, will roughly represent the improved road to the Ojai Valley. Of your fingers, spread out fan-wise, the index finger will represent the good road up through the Santa Clara River valley, past Santa Paula, and Fillmore, and meeting the Los Angeles county good roads system just west of Castaic. There was considerable heavy grading on this road, and while it is complete from Ventura to Fillmore, between Fillmore and Saugus it will probably be at least two months before the road is completed. Difficulty in securing materials, because of the railroad embargo on shipping road materials, may delay its completion much longer.

Your middle finger will represent the road from Saticoy through the Simi valley, that meets the Los Angeles county good roads at Chatsworth, via Santa Susanna Pass. From Saticoy to Moorpark the road is completed. Six miles between Moorpark and Simi are still unfinished. From that point on, the road over Santa Susanna is almost complete, but quite a number of short detours are still necessary, owing to the construction of culverts and bridges.

The ring finger will not, as a matter of fact represent a Ventura county highway, but the state highway, instead,



DEEP CUT AT THE SUMMIT OF GAVIOTA PASS.

by way of Camarillo and the Conejo Grade. Three miles just east of Ventura has not yet been concreted, but except for this the entire stretch is smooth pavement now.

The little finger will stand for the Ventura county lateral from El Rio down to Oxnard. From Oxnard the concrete road runs to Hueneme, and thence north again to form a loop by joining the State Highway at Camarillo.

Ventura county highways thus were fortunately well toward completion when the unexampled prosperity of soaring bean prices put everyone in the county in a better position to buy an automobile than ever before.

There is much of beauty for the motorist to find in the



SHOWING THE HEAVY GRADING NECESSARY ON THE STATE HIGHWAY ON NORTH SLOPE OF GAVIOTA PASS.



ON EL CAMINO REAL, JUST EAST OF CARPINTERIA.
AMBITIOUS EUCALYPTUS SPLITS A MONTECITO ROCK.

FORDING THE SANTA YNEZ NEAR PARADISE CAMP.
POTTER HOTEL, SANTA BARBARA'S FAMOUS INN.

roads of Ventura county, particularly in the spring and summer. It would be hard to find a more beautiful stretch of country in the whole of California del Sur than the rolling hills and fields of the oak-shaded Conejo country in the spring when the mustard is in bloom. And all summer long, the enormous bean fields of the rich, flat lands of the valleys are emerald green, a welcome sight to the eye of the Californian, used to summer fields of parched brown. The beans draw their necessary supply of moisture from the summer-morning sea-fogs; seemingly a rather ethereal source of supply for such a prosaic vegetable as the bean.

The road of greatest charm in all Ventura county, however, she shares equally with her sister county on the west. It is none other than the famous Rincon sea-level road, state highway now, but which was pioneered by the two counties of Ventura and Santa Barbara in the effort to become better acquainted with each other. Before the Rincon road was first put through in 1912, travelers by road between Ventura and Santa Barbara had to climb over the steep and dangerous Casitas Pass. Through co-operation between the two counties, funds were raised and the long causeways built that span those curves of the shore where there was no room for road between the breakers and the steep yellow hills.

Later the road was taken over by the state, paved all the way, and substantial bulwarks of stone erected against encroachments of the waves. It is a road with a charm all its own, with its curving miles stretched in a narrow ribbon along the line of the shore. It is a lonely road with scarcely a single house along its entire distance.

a bit of unspoiled sea-shore that will long remain untainted by roller-coasters, peanut-stands or hot-dog men. If you want to get acquainted with the Pacific Ocean, travel the Rincon road, and take your time about it.

Leaving the sea some 12 miles west of Ventura, the road climbs through a canyon to the beautiful level land that lies between the hills, which have here retreated inland, and the ocean. A few miles farther brings the traveler to Carpinteria. There is some dissension as to how the Spanish name came to be applied to this little settlement. One story has it that the hosts of woodpeckers which inhabited the beautiful forests of oak trees gave rise to the name, but the chronicles of the padres as related in Father Engelhardt's book declare that when the venturesome priests made their first journey up the coast they found the Indians at this point building a canoe, and hence named it "Carpinteria."

Summerland, where enterprising oil men pursued an oil-bearing sand clear into the ocean, is always of interest to the tourist. Just beyond Summerland is a grade over a small hill, but there is a movement on foot to carry the road around the seaward side of the hill on a level grade and eliminate this, the only grade of any consequence between Ventura and Santa Barbara.

As one drives through this section between Summerland and Montecito, he may note the unique and beautiful conformation of the country of which this section of Santa Barbara county can boast. A level, fertile fringe of land lies between a summer sea and a lofty range of hills, pine-crested, higher by far than those which elsewhere approach the coast this closely. The blue line of the Channel

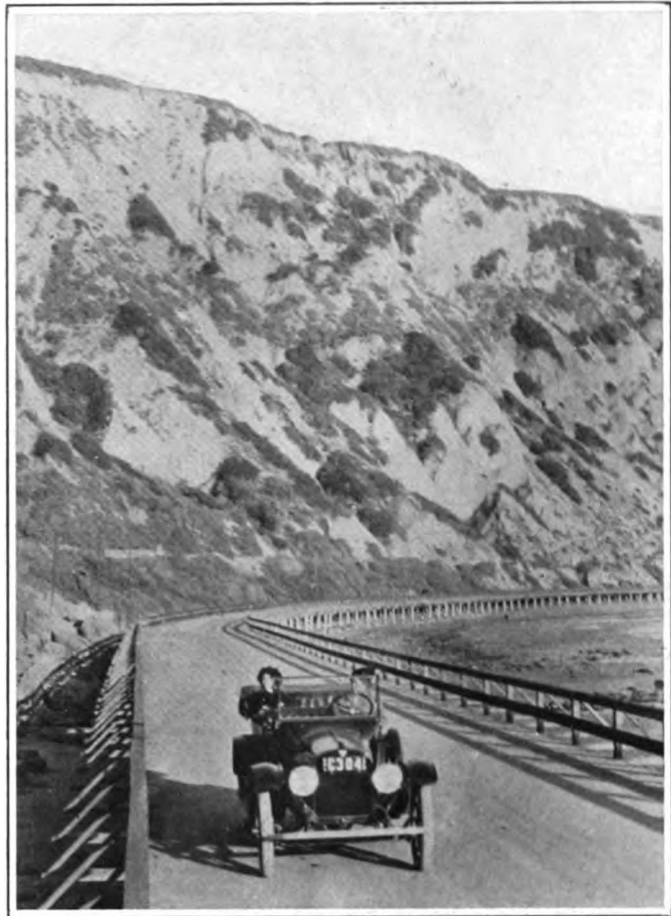
Islands rise from the sea-rim, breaking the full sweep of Pacific winds and waves against this favored coast. It is little wonder that one finds at Montecito the homes of scores of America's richest men, who winter here in preference to any other spot in the world.

Santa Barbara county ranks highest among all the counties of the state in ratio of automobiles owned to population. Montecito would probably outrank any community anywhere. Huge garages on some of the great estates house often as many as twenty machines, one for every guest that may chance to be invited. No journey through Santa Barbara county is complete without a leisurely tour through the by-ways of Montecito, under the tended oak trees that look as though their very acorns were manicured and polished.

The city of Santa Barbara itself is a clean and beautiful town that instantly attracts the visitor. True, it may puzzle him to understand why the business district is one street wide and twenty blocks long, and why what should be a wonderful boulevard along the ocean front should be so rough that no one travels it save at peril of broken springs and ruined temper. But doubtless there is some explanation for even this latter condition of affairs.

Above Santa Barbara for a few miles the good road continues. Between tall lines of beautiful poplars it runs, and over its smooth surface in the winter season rolls a constant procession of splendid automobiles. It is a favorite drive for the wealthy winter visitors of the Santa Barbara section, a regular parade ground of Packards, Pierce-Arrows, Rolls-Royces and other cars of that sort.

To the keen regret of every Californian, another winter must go by with the Coast Highway still incomplete. Above Goleta, just north of Santa Barbara, begins a 30-mile missing link of the Camino Real that will cause even the best-natured motorist in the world to become a trifle peevish. The State Highway goes by way of Gaviota Pass (named for the sea-gulls by the old padres), because of the fact that its grades are far easier than those of San Marcos. The strip of road between Goleta and Las Cruces, something over 25 miles, is bad road—road for which no Californian can do else than humbly apologize



BOWLING ALONG OVER THE RINCON SEA-LEVEL ROUTE.

to the wrathful tourist who has been led to expect nothing but good roads everywhere in the Golden State.

Improvement of this section would have been well under way by this time had it not been for the war. Shortage of labor, shortage of material, and the recent curtailment of road material shipments have simply tied the hands of the State Highway Commission during the past few months. They have succeeded, however, in greatly im-



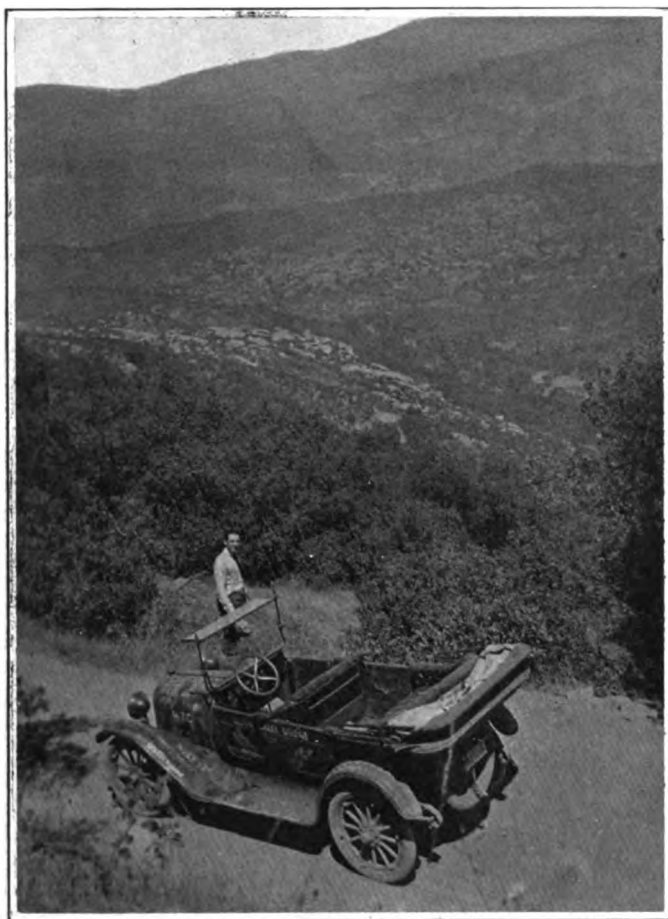
VIEW ON MILLIONAIRES' WAY, SANTA BARBARA TO GOLETA.



A STOP AT THE OLD SANTA BARBARA MISSION.



ONE OF THE MANICURED OAKS ON MILLIONAIRES' WAY.



RUGGED VIEW FROM NORTH SLOPE OF SAN MARCOS.

proving the Gaviota Pass itself. Four miles of new grading on the north and south slopes of the pass have made it much easier to negotiate. The north slope has been heavily surfaced with gravel, and once the tourist has reached Las Cruces, on the southern slope of the pass, his troubles are over for a time.

The alternative route, San Marcos Pass, is far more beautiful than Gaviota, but a much more difficult road to negotiate. In time of rain the greasy mud on some of the steep grades of the southern slope makes it a decidedly dangerous road. No one should attempt San Marcos as a pleasure trip except when the roads are dry.

San Marcos road was built first by the padres, or rather it was built under their direction by the faithful Indians of the Santa Barbara Mission. After Santa Barbara was well established the padres sought to extend their domain by establishing the Mission Santa Ynez across the range. So the road was built, first a trail to accommodate foot-travelers, horses and pack-mules, and then widened to meet the needs of wheeled transportation later.

On a clear day there is no mountain trip in Southern California to give more sheer delight than a ride over San Marcos. Turning and twisting up the steep south wall of the range, the road rises so fast, and the valley and ocean fall so sheer below, that it is almost akin to airplaning. Directly below are the orchards and fields of Goleta, eastward Santa Barbara's roof-tops shine in the sun, and beyond is the vast and wonderful shimmering blue sheet of the Pacific, broken only by the rugged purple peaks of the Channel Islands.

At the summit the view of the seaward slope is exchanged for another scarcely less fascinating—the view

over the vast and rugged mountain country through which winds the Santa Ynez River. Range after range of tumbled mountains lie to the north, and the road leads down, less precipitous in slope, to the bed of the Santa Ynez River, down past the Santa Ynez Mission and joins the State Highway again just south of Los Olivos.

Santa Barbara has awakened to the benefit that the completion of the good road to Los Angeles has brought her and is bending every effort now to hasten the completion of the State Highway through her borders to the north. Hundreds of motorists from Los Angeles and vicinity now seek Santa Barbara as an ideal place for a week-end outing, and hotel accommodations in Santa Barbara late on Saturday evenings are difficult to find as a rule. When it is possible for the motorists of San Francisco and vicinity to tour down over splendid roads all the way, Santa Barbara folks realize that they will get the benefit of a doubled travel. And, with El Camino Real complete from end to end, the winter motor travel up and down its length is going to be a factor of importance that it is hard to estimate.

Yosemite Visited By 6,521 Cars This Year

Automobile travel into Yosemite National Park shows an increase of more than one half over last year's figures, is the information contained in the annual report of the Director of National Park Service to the Secretary of the Interior. Before October 12 this year 6,521 cars entered Yosemite, compared with 4,043 for the year before. A total of 34,510 persons visited the Park this year against 33,390 during last year. "In the Yosemite National Park during the past year," says the report, "there has been improvement in every direction—improvement in trails and roads, in accommodations for visitors and facilities for travel in the Park by the erection of new hotels and camps, in camp grounds, public utilities and sanitation. There has been a general increase in tourist patronage and an astonishing increase in motor car travel. The year 1917 has been one of the most important years of Yosemite history.

"Probably the most important project completed this year was the erection, completion and furnishing of the new Glacier Point Hotel on the rim of the famous valley. This hotel was completed during the winter and was formally opened to the public early in July. It is beautifully situated on the very rim of the gorge, where a magnificent view may be obtained of all the great canyons through which the Merced and its tributaries flow. Vernal and Nevada Falls are plainly visible and a panorama view of the peaks of the Sierra may be had from the hotel."

Several camps were operated on the floor of the valley, including Camp Yosemite Falls, Camp Ahwahnee and Camp El Capitan, in addition to the hotel and resort on the Big Oak Flat road and three lodges in the high Sierra. The sport of boating on the Merced River was developed last summer for the first time, according to the report.

The entry of the country into war brought up the question as to whether the parks would be opened by the Government for the summer, but the patronage proved "the soundness and reality of the park's great mission of education, recreation and health."

Chicago Show Number, January 15.

San Francisco Show Number, February 15.

"Over the Top" In a Studebaker Six

Fed up on the rush and roar of civilization and anxious to escape the multifarious petty details and endless worries of the store and office, a party of intrepid Los Angelenos recently decided to hie themselves into the wilds for a few days and nights to enjoy the healing balm of the great silent places. Packing their Studebaker Six with a store of provisions, plenty of blankets, two of the new Studebaker suspension auto beds, a tarpaulin for a roof at night and a couple of good fowling pieces, they donned their outing togs and headed in the direction of El Cajon and the Big Bear country.

Furnace Canyon is on the road to Big Bear—and it is all that the name implies. It is reached via San Bernardino, Victorville and Mojave desert. About an hour out of Victorville the party reached the "Box S" rancho, a regular oasis with green trees and running water in the midst of the desert. From here an abrupt turn was made and the car plowed its way across the desert for eight miles, bringing up at the Garrison ranch, located at the mouth of Furnace Canyon.

"Going up to Gold Point?" the ranchers asked the motorists—and then they wanted to know how many horses would be required for the trip. "It's a good road for burros and pack animals," they said, "but visitors leave their cars here and either walk up or go horseback."

An hour later the reason was apparent. It was a long cruel grind to the foot of Elephant Butte, all in the low gear, with rear wheels constantly spinning and tearing through jagged rocks and loose gravelly sand. Here the grade changes to a rise of 4 feet 10 inches every 14 feet. The scenery is mostly turned up edgewise and the temperature is such that one instantly realizes why they named it Furnace Canyon. And it is here that thirty-eight out of forty-one cars have been forced to turn back in the past year trying to reach Gold Point mine at the summit.

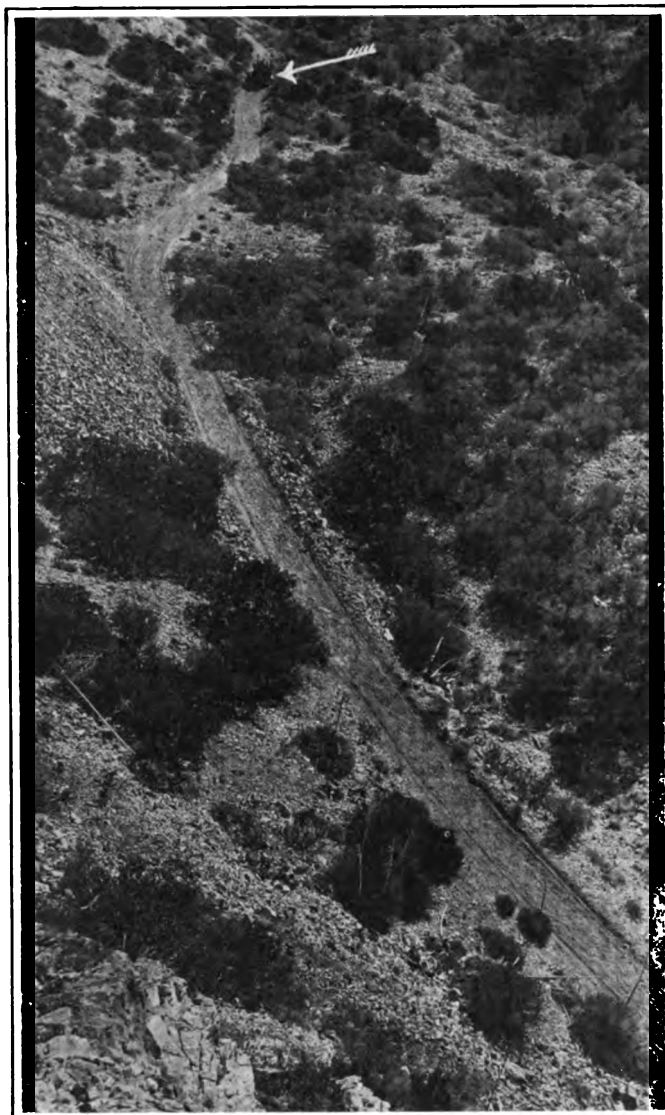
After a long, grueling low-gear climb, however, the car was finally driven out on a ledge at the summit and the excited motorists looked down on what seemed like an enchanted ocean spread out below and stretching away to the southward. And here the car was parked, commanding what is probably the most inspiring scenic spectacle in Southern California, while the members of the expedition were given a rousing ovation by the entire force of the mine. Only one other make of passenger car ever made this thrilling trip—and that was an eight-cylinder job selling at double the Studebaker price.

General Grant Park Visited by 2,266 Cars

General Grant National Park was visited by 2,266 automobiles during the 1917 season, carrying 17,496 passengers. The total attendance of visitors was 21,657 persons, which was 6,000 more than entered the Park during the previous season. About 40 per cent of the visitors were people who entered the Park for the second and third time this season.

Motorist Lost on the Utah Desert

The unique experience of being lost for three days in the Utah Desert, without food or water, was the unwellcome lot of A. E. England and E. R. Tappan, Detroit motorists, on their recent trip to Los Angeles, in a Good-year-tired Oldsmobile. All went well until in some un-



HERE IS A VIEW OF THE FAMOUS FURNACE CANYON ROAD. THE ARROW INDICATES WHERE THE STUDEBAKER SIX IS JUST ABOUT TO GO "OVER THE TOP."

accountable manner they strayed from the Lincoln Highway, and before they realized their mistake, were plugging away through washes and sand dunes.

As the heat was terrific both men drank some of the water from the radiator, and suffered considerably from its effect. After their gasoline and water had given out, Tappan started out on foot to follow the wagon track, and about four miles farther on came to a miner's cabin. Gasoline was obtained at another mining camp several miles away, and following the directions of one of the miners, the two explorers were soon back on the Lincoln Highway.

Car Demand According to Price Divisions

It has been estimated by Government experts that there are now in this country 1,400,000 owners of passenger automobiles that cost at the time of the original purchase \$500 or less, 760,000 owners who paid between \$500 and \$1,000 for their cars, 1,219,000 in the \$1,000 to \$2,000 class, and many thousands of cars above the \$2,000 figure. These figures measure the cumulative quantitative demand for passenger automobiles during the last several years and represent one car for every 27 persons.

Motor West

LOS ANGELES-SAN FRANCISCO-PORTLAND-SEATTLE

The Motoring Authority of the Pacific Coast.
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January 1, 1918

Working at Cross Purposes

WITH the United States Government taking the lead in its insistence that all media of transportation shall be worked to their maximum capacity; with the railroads straining every nerve to meet the freight-car shortage by loading its cars to the limit—it is astounding to learn that here in California some over-zealous county and town officials are holding motor truck owners to a rigid observance of the load-weight limits as outlined in the State's new automobile law, the section concerning which went into effect last July.

When this law was framed the United States was not at war, and the load-weight limit was designed for peace times. With the dearth of man-power occasioned by the war, with the scarcity and high prices of horses due to the same cause, and with the railroads staggering under the extra burdens imposed upon them, it became imperative that the motor truck should, so far as possible, make up for these deficiencies.

In the East and the Middle West the motor truck is gallantly endeavoring to shoulder its portion of the mighty burden, and overloads are not only permitted, but, where the conditions are such that the truck can pick up a load greatly in excess of the manufacturer's rating, such overloading is urged in short-haul work.

Here in California motor truck owners are, when permitted, loading their vehicles far beyond their rated capacities, the State's road system being admirably adapted to the transportation of such overloads. But in some sections of the State super-serviceable officials are hampering the speeding-up process by arresting drivers of overloaded trucks, haling them before the nearest magistrate and having them fined.

With all due regard to California's highways, and the possibility that they may be injured to some extent by the passage over them of overloaded trucks, it should not be forgotten that we are at war, and that the first business in hand is to win the conflict.

In this emergency it behooves those in authority to issue orders that those paragraphs of Section 15 of the new automobile law of the State of California relating to the weight of vehicles, as well as the limitation in the number of trailers to be used, shall be declared null and void during the period of the war. Otherwise California may be held up to the opprobrium of the other States as the one Commonwealth in the country which considered its own welfare before that of the United States.

"Pacific Coast Has Finest Roads In the Country"

AFTER nine months of steady touring, during which they have traveled approximately 5,000,000 miles, the forty-two cars of the Goodrich tire-testing fleet are returning to the Akron factory from every part of the country.

The reports turned in by the crews of these cars give a better indication of the road conditions throughout the country than can be had from any other source.

The work of the crews of these cars has demonstrated that there is hardly a nook or a cranny in this country that is not accessible to the motorist. Even the desert has no terrors for the motorist nowadays.

A resume of the reports says, among other things: "The Pacific Coast has the finest roads in the country. Consequently the motorist there gets more tire mileage and uses less gasoline per mile than in any other region. * * * Prosperity in the farming states of the west has never been greater. * * * The 2,200-mile run from Chicago to Los Angeles is the finest pleasure tour in the country. Gasoline can be had every 50 miles, and there is only one tough spot in the entire route—a 40-mile stretch near Ashfork, Ariz. * * * Notwithstanding the war, transcontinental travel has been greater than in any previous year."

The observations of the trained men composing these crews are worthy of consideration by Eastern and Middle Western motorists who may contemplate a tour during the present year.

Another section of the report states that "on the whole, there are few bad roads in the country today. The war has not, contrary to expectations, lessened the volume of road building and improvement. States have been aroused to the necessity of keeping up their roads, because they have found that better roads means a greater volume of business. The more attractive the roads, the more picturesque the surroundings, the greater the community's prosperity; hence the general alertness on the part of local governments."

Motor Trucks to Relieve Railroads' Burden

FEWER passenger cars and more motor trucks is the program of the United States for the time of war.

Government experts predict a very considerable use of the motor truck in short-haul freight transportation, and are of the opinion that the railroads will be relieved of much of their transportation troubles by the use of motor trucks wherever possible in transporting merchandise from city to city. The government plans to inaugurate such a system and has appointed a committee with Roy D. Chapin as chairman to superintend the installation of short-haul motor truck freight service in every part of the country.

Motor Means Much to Farmer

Without It He Would Be Unable to Perform His Great Task of Feeding the Allied Armies

ON THE American farmer rests the responsibility of feeding the allied armies in Europe and also the civil population of the United States and to a very large extent that of England, France, Italy and Belgium. At the same time the farmer is confronted with a shortage of labor, high wages and greatly increased cost of keeping horses. These conditions make it necessary for him to increase his own efficiency and that of his men and his land.

To do this he must make more use of time-saving and labor-saving machinery. The farm tractor for plowing, harrowing and cultivating affords the farmer the most advanced means of greatly increasing his production without hiring more men or using more horses. The automobile and motor truck furnish a means of independent transportation that is essential to the farmer under present conditions.

No element of our population is so dependent on individual transportation as the farmer. Usually he is miles from the nearest railroad station and he has a great volume of hauling to do. With a motor truck he can haul larger loads than with a team of horses and can make several trips to market in a day for every one with a team. The horses can be kept on the farm for use in the fields, for hauling wood from the wood lot and for various other work. With a motor truck it is entirely practicable to haul a load of farm produce to cities 40 to 50 miles away and return home the same day. This is highly important in view of the critical freight congestion on the railroads and the need of relieving them of short-haul work.

The superior speed of the motor truck enables the farmer to take advantage of dry weather, when the roads are in good condition, to do the bulk of his hauling. It also permits him to get immediate benefit of market conditions when prices are high.

Farmers appreciate the many advantages of the passenger automobile. This is shown by the fact that there are two to three times as many motor cars in proportion to population in the agricultural states in the West as in the industrial states in the East. Farmers are estimated to own nearly half the automobiles in the United States and are the largest buyers at the present time. The largest increase in registrations during the first half of 1917 occurred in agricultural states.

The farmer uses his car as a utility vehicle almost entirely. He drives into town and back in an hour where the trip would take half a day with a horse and buggy. He fills the tonneau with cases of eggs, a tub of butter, cans of milk, sacks of potatoes or even a calf, sheep, or crate of chickens, and brings back rolls of wire fencing, roofing paper, tools or anything else needed on the farm. If some part of a mowing machine, reaper, cultivator or other farm machine breaks, a quick run to town in the car will bring the replacement part in an hour or two so that the time lost by the men and machine is reduced by several hours.

The automobile makes it possible for the farmer to keep in close touch with his neighbors and with the outside world. He and his family and farm hands can attend church, social gatherings, entertainments, political meetings, lectures on improved agricultural methods, good roads meetings, etc., in the evenings and on Sundays, and return home at a reasonable hour. Meanwhile, the horses get necessary rest in the stable. Thus all are refreshed and fit for the next day's work. The younger children can be driven to and from the graded schools that are replacing the old one-room district schools and regularity of attendance greatly increased.

This facility of getting about easily and quickly relieves the monotony of farm life, makes the boys and girls and "help" more contented and tends to retard the movement from the farm to the city.

Every passenger automobile used means that at least one horse can be dispensed with. Each horse requires five acres of land for his support. By using the car, the farmer can devote five acres of good land to raising wheat, potatoes or other staples for human consumption or for raising beef or mutton. A motor truck takes the place of at least one team, an on a large farm requiring a great deal of hauling, will do the work of five or six horses. This will release from ten to thirty acres, sufficient for the support of three to ten human beings. At present high prices of farm products the farmer loses money on every horse he keeps.

All States Sharing In Federal Road Aid

All the States of the Union have availed themselves of the opportunity of participating in the benefits of the Federal Aid Road Act, which appropriated \$75,000,000 for the construction of post roads and \$10,000,000 for forests roads, according to the report of the Director of the Office of Public Roads and Rural Engineering, United States Department of Agriculture. That the passage of the act has stimulated road building is shown by the fact that in 1916 there were approximately \$41,000,000 of State funds expended for all highway purposes, and it is estimated that in the calendar year 1917 the aggregate expenditures of State funds for this purpose will be at least \$60,000,000.



Calendar of Coming Events

January 2-9, 1918—Automobile Salon, Hotel Astor, New York City.

January 5-12—New York National Show.

January 26-February 2—Chicago National Show.

January 26-February 2—Automobile Salon, Congress Hotel, Chicago.

February 2-9—Minneapolis, Minn., Show.

February 6-13—Portland, Ore., Show.

February 9-16—Kansas City, Mo., Show.

February 11-16—Third Annual National Tractor Show, Kansas City, Mo.

February 11-16—St. Louis, Mo., Show.

February 16-26—Annual San Francisco Show, Geo. A. Walhgreen, manager.

February 18-23—Des Moines, Ia., Show.

February 23-March 2—Omaha, Neb., Show.

March 2-9—Boston, Mass., Show.

April 9-13—Stockton, Cal., Show.

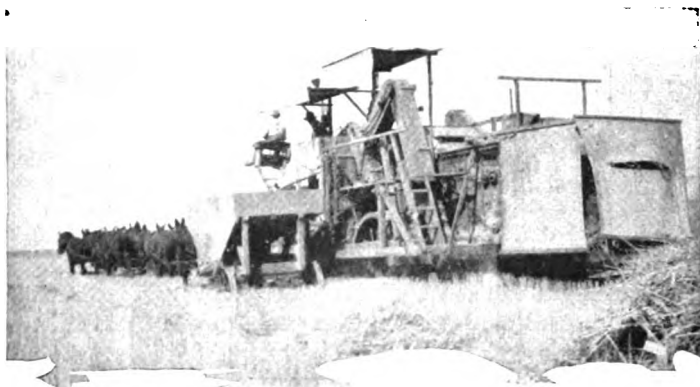


Harvesting by Motor Truck

Oregon Ranchmen Demonstrate Economy of Using Duplex Four-Wheel Drive in Gathering Grain From Fields

UP IN OREGON, on the W. H. McCormanch ranch, the combination of four men, a specially rigged combine and a Duplex motor truck are now handling in bulk and in quick time the entire wheat crop grown there. The new system eliminates the use of sacks, sack sowers, a jig on the combine and wheat bucks in the field and at the warehouse. From the minute the wheat reaches the combine in the field until it arrives at the elevator alongside the railroad track the wheat is untouched by hand.

In this all-mechanical system a traveling hopper first receives the threshed wheat from the combine, then the



HOPPER RECEIVING THRESHED WHEAT FROM COMBINE.

Duplex truck in turn receives it from the hopper. Four hoppers are so placed about the field that the moment one is filled another is conveniently near at hand to receive the output of the combine.

These hoppers are so designed that they hook onto the combine and the threshed wheat is transferred directly into them through a spout. When each hopper has reached the limit of its capacity, which is for 60 bushels, a lever is tripped and the hopper drops by the wayside.

So far the work has proceeded swiftly, efficiently and successfully. But a second problem, fully as large and vital, remained—namely, that of transporting the wheat from the hopper to the elevators, probably a mile away. Here the Duplex truck stepped in to fulfill the motor truck's mission of relieving the shortage of human labor by bringing mechanical science to the task.

For this work on the Oregon ranch the Duplex truck carries a bin, which has a capacity of 130 bushels—slightly



TRANSFERRING WHEAT FROM HOPPER TO TRUCK.

more than the combined capacity of the two hoppers. A small elevator attaches to it, constructed on the same principle as those in the large grain elevators. This little truck elevator is operated by power delivered from the truck engine through an auxiliary shaft and belting.

A short spout is attached to the trap door in the bottom of the hopper which leads to the bottom of the truck elevator. It is but a matter of a few minutes before the entire load of wheat is transferred from the hopper into the truck. After being relieved of its burden, the empty hopper is hitched to the truck and hauled to its next station in the path of the combine. The truck then proceeds to another hopper and repeats its performance.

With the contents of two 60-bushel hoppers aboard it leaves the scene of harvesting and heads for the elevator a mile distant. Upon arriving at the bins the driver of the Duplex hooks the spout of the little truck elevator over the edge of the bin and starts the engine. Within a few minutes the truck is empty, whereupon it swings about and heads for the field to take on another load.



EMPTYING THE TRUCK INTO THE ELEVATOR BIN.

Motor Trucks In Postal Service

More than \$320,000 was saved by the U. S. Post Office department by the use of motor trucks during the fiscal year ended June 30, 1917, according to the annual report of the Postmaster-General. There were 774 motor vehicle routes in operation by the department during the year. One of the cities where government-owned trucks were operated during the entire year, the motor trucks were required to make 384,526 trips and there were only 132 failures, or one failure to every 2,913 trips.

"It is desirable," says the report, "that existing legislative restrictions be removed and opportunity provided for the establishment of service by motor vehicle to rural communities that are entitled to better means of conveyance and communication with markets where produce may be disposed of to the best advantage and where the farmer producer can be supplied with necessary implements and supplies through the mails without loss of time incident to a personal trip to such market centers."

Large U. S. Truck Contracts to 17 Firms

Contracts calling for the assembly of 500 class B trucks which have been given by the United States government to the Kissel Motor Car Co., the Garford Motor Truck Co., the Kelly-Springfield Motor Truck Co., Bethlehem Motors Corp., the United States Motor Truck Co., the Brockway Motor Truck Co., the Velie Motors Corp., the Sterling Motor Truck Co., the Diamond T Motor Car Co., the Republic Motor Truck Co., General Motor Truck Co., Indiana Truck Corp., Packard Motor Car Co. and the Service Motor Truck Co. Contracts for 1,000 trucks of the same class have been let to the Selden Truck Sales Co., the Pierce-Arrow Motor Car Co., and the Grammer-Bernstein Motor Truck Co.



MAXWELL ONE-TONNER WHICH CARRIED LOAD 1500 MILES.

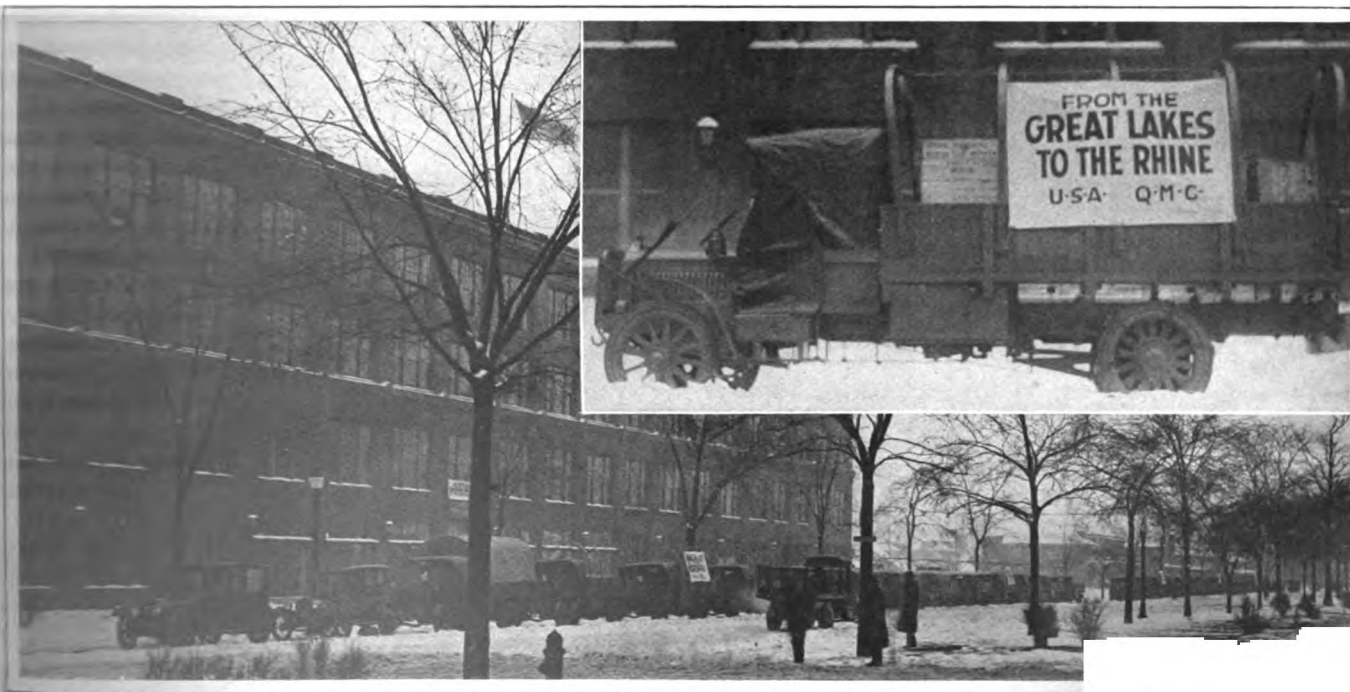
Maxwell One-Ton Truck Carries Freight 1500 Miles

That the motor truck is a reliable means of transportation in cases of railroad inefficiency is thoroughly demonstrated by the feat of the Maxwell truck with its one ton of groceries arriving at Atlanta from New York without a mishap or consequence during the 1500-mile run.

The Maxwell left New York with a ton of groceries from a New York wholesale house for delivery to the Louisville and Nashville warehouse in Atlanta.

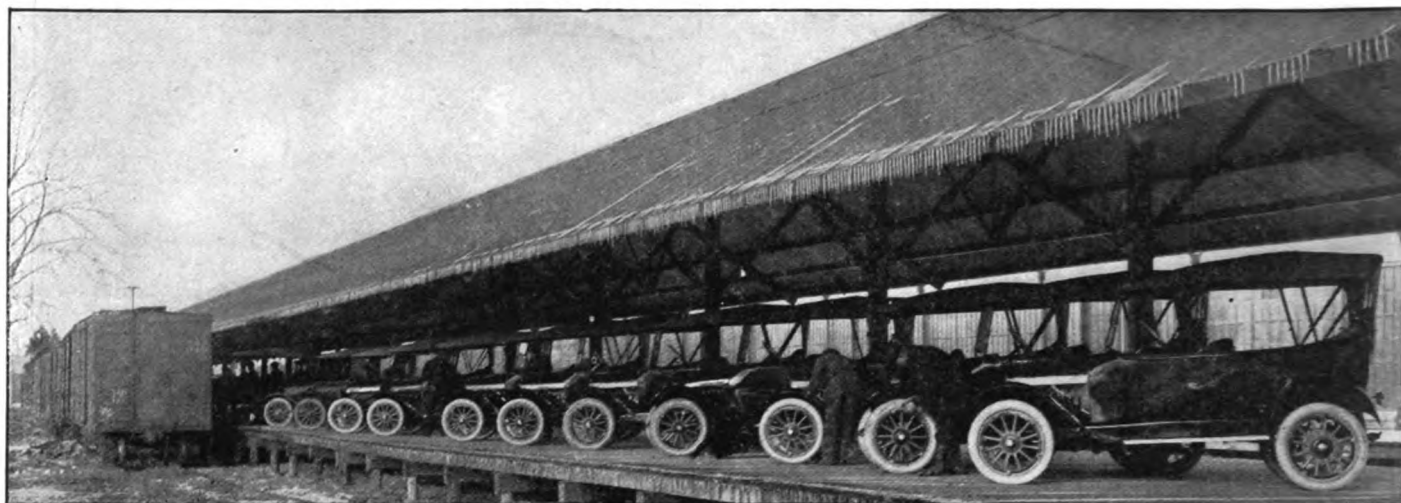
So well had the Maxwell stood the long hard grind that a one-ton load of shoes was collected in Atlanta and the truck sent southward to Jacksonville to show its ability over the loose sand roads of Georgia and Florida.

All army camps located near the roads traveled by the truck were visited. In order to reach the quartermasters' departments many times it has been necessary for the truck to cut across lots, ditches, cotton fields, and worm its way through unbroken wood paths. Regardless of the obstacles the truck made as high as 12 miles to the gallon. At no time did the water boil in the radiator.



UNCLE SAM'S MOTOR TRUCKS TRAVEL FROM FACTORY TO SHIP UNDER THEIR OWN POWER.

Three-thirty chainless Packard trucks left Detroit, Mich., recently in the cold winter dawn, bound for the Atlantic seaboard under United States army service. This caravan was the first of the motor truck caravans which it is planned to drive from the Great Lakes to the Rhine. At the same time the trucks carried loads in order to do their share toward relieving the freight train. The move was made according to plans drawn up by the Quartermaster Corps of the United States Army in conjunction with the Committee of the Council of National Defense. Snow has already fallen heavily in the East and immediately upon leaving Detroit the trucks encountered heavy snow-drifts blocking the roads. Throughout its progress to the Atlantic Coast the truck train met with heavy demonstrations.



Our Duty To Our Distributors

Picked motor car distributors in virtually all the leading cities of the United States hold five-year contracts with this Corporation.

Under these contracts these distributors buy and sell; under these contracts we build and deliver.

WE MUST KEEP THESE DISTRIBUTORS PROFITABLY, PERMANENTLY IN BUSINESS.

HARROUN

The period immediately before us will bring no sales problem for the automobile merchant who has Harroun cars to sell.

A new economic condition is filling as never before the pockets of the farmer, the business man and the skilled laborer.

But the **SUPPLY** of cars in the popular priced field **WILL SURELY RUN SHORT.**

Production in 1918 will be the lowest in any year of the last five. It will be under rigid limitation.

Patriotic service and the lure of government-order profits will absorb much of the industry's efforts.

To this patriotic service the Harroun Motors Corporation has unhesitatingly assigned space, equipment and capital. But this assignment was so made that it will aid, rather than hamper the rapidly increasing production of Harroun Motor Cars.

Second only to our duty to our country stands that duty which we owe our distributors and dealers.

We are in the automobile business TO STAY.

Harroun Motors Corporation
Factories and Offices, Wayne, Michigan

Jones Enters the Truck Business

Announcement has been made by the Jones Motor Car Co., manufacturers of the Jones line of passenger cars, of its entrance into the truck business. While it is expected that a two-ton truck will be on the market by March 1st, formal announcement has been made by President J. J. Jones that deliveries will be ready by February 10th on the one-ton model, which will sell at \$1,100.

The Model N Continental motor, four-cylinder, $3\frac{1}{4} \times 5$, will be used. Ignition will be high-tension. A vertical tube radiator will be used—circulation being by positive gear-driven, centrifugal pump and fan mounted on motor.

The loading space will be nine feet—designed to carry one and one-half feet overhang. Front springs are 44 inches long by two inches wide, with nine leaves. Rear springs are 52 inches long by 3 inches wide, with 10 leaves. The tread is 56 inches. Tires are solid—front $34 \times 3\frac{1}{2}$; rear 34×4 . The wheelbase is 130 inches, and the weight of the chassis is 2,750 pounds. Standard equipment is used throughout.

After a number of years of experience and experiment with spring construction the Jones engineers have developed a spring using the proper amount of oil vanadium equalizing leaves, so placed as to eliminate spring troubles.

President Jones has set a mark of 2000 for the 1918 truck production and plans are being made in the factory to that end. Mr. Jones and Sales Manager H. E. Dickinson have just recently returned from an observation and material buying trip in the Eastern markets.

Duplex President Predicts Motor Truck Shortage

With the government purchasing thousands of motor trucks; with all lines of business motorizing their haulage and delivery departments more extensively than ever before. H. M. Lee, president of the Duplex Truck Co., believes the 1918 demand for commercial vehicles will greatly exceed production, although practically all manufacturers have increased their facilities for building motor trucks during the ensuing year. Throughout the country there is even now an unprecedented demand for motor trucks—so great that before very long it will be practically impossible to fill orders for many individuals and corporations.

Of course the government's demands come first, and almost the entire output of several of the country's largest motor truck companies have been contracted for by the Federal authorities. More government orders are to be placed in a short time and there will be but few truck manufacturers in a position to take care of orders from individuals and corporations. It is estimated that the demands of the warring nations during the ensuing year will equal the motor truck output of 1917.

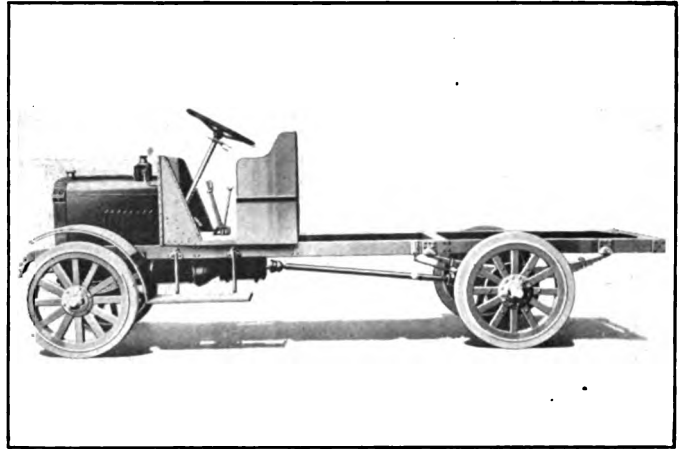
And the demand from all lines of industry has been increasing tremendously and will become greater if the government places an embargo on the shipment by freight of the 500 products and commodities recommended by the War Board.

With these luxuries and semi-necessities barred from transportation by the railroads, motor trucks will be pressed into service and overland truck routes will spring up in all sections where it is possible to secure commercial vehicles.

Motor truck manufacturers realize that the demand for their product will be greater than ever before and every factory will rush its production to the utmost. But even so, there is every probability of a great shortage of motor trucks during 1918.

Refinements In New Fulton Truck Bring Economy

The Fulton Motor Truck Co., Farmingdale, L. I., has gotten well under way the production of its new $1\frac{1}{2}$ -ton truck, the model F-X. The new truck sells for \$1,420 and contains many improvements over its predecessor of the same capacity, which was known as the F-1 model. The four-cylinder engine on the new model is larger than that on the older truck and therefore is not interchangeable with it. It is of the L-head type and the four cylinders are



THE NEW ONE-TON JONES TRUCK.

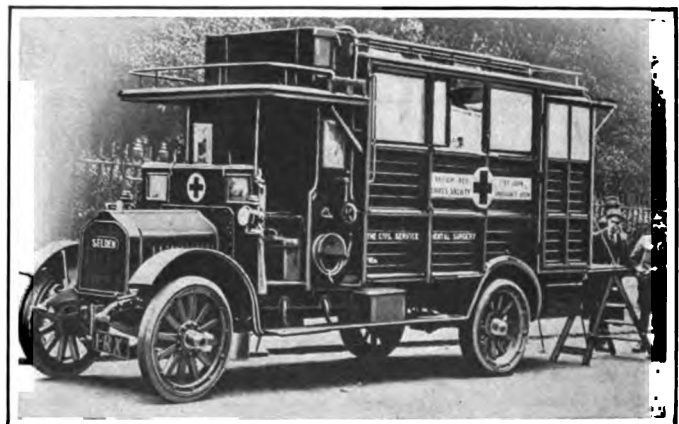
$3\frac{1}{4}$ by 5 and develop 36 to 38 horsepower. The compression is higher in the new engine than in the old one and this makes necessary a variable spark instead of the set spark on the old truck. Ignition is by Dixie magneto. The decidedly low fuel consumption of from 14 to 15 miles per gallon with $1\frac{1}{2}$ -ton load is the result of the numerous refinements in the new model. Drive is through a Borg & Beck clutch. The rear axle is a Russel internal gear of heavier type. The tires are 34 by $3\frac{1}{2}$ inches in front and 34 by 5 in back.

Higrade Adds One-Ton Truck

The Higrade Motors Co., Buffalo, N. Y., has added a one-ton truck model to its line. A short time previous the company announced its new three-quarter ton model. The chassis of the one-ton product is listed at \$1,800, which covers the usual equipment. The engine is Model N Continental with cylinders $3\frac{1}{2}$ by 5. Another feature of the new truck is the 35 by 5 Goodyear tires on the front and rear wheels. When the truck, however, is to be used in service where it will not carry a load exceeding 1,500 pounds the truck can be secured with the wheels shod with regular fabric pneumatic tires at a reduction of \$50.

Delivering Army Trucks By Highway

Thirty thousand army trucks ordered by the War Department will be driven over the roads from the factories in the Middle West to Atlantic ports for shipment to the front in France during the present winter and coming spring. Fifteen thousand freight cars would be required to haul the 30,000 trucks by rail and 2,250 additional cars to carry the cargo of spare parts and supplies that will be transported on the trucks. With fifty cars to a train, there would be 345 trains. The plan will therefore release 17,250 cars and 345 locomotives and train crews for handling other essential freight.



ARMY DENTAL CAR MOUNTED ON SELDEN CHASSIS.

Another Great

This car will be exhibited at the New York Show—Space G-11, 3rd floor, Grand Central Palace.



This car will be exhibited at the Chicago Show—Space G24 to 49 in the Greer Building.

By World's Champion Light Six 6,202 Miles With SEALED Hood, Clutch and Transmission

CHICAGO to the Pacific Coast and back—no CHANCE to touch the engine—no chance to even LOOK at clutch or transmission—that is the latest wonderful record of the ELGIN SIX.

The Valve-in-head Motor never faltering on the steepest inclines, in the deepest mud nor the heaviest sands—

The CLUTCH holding on

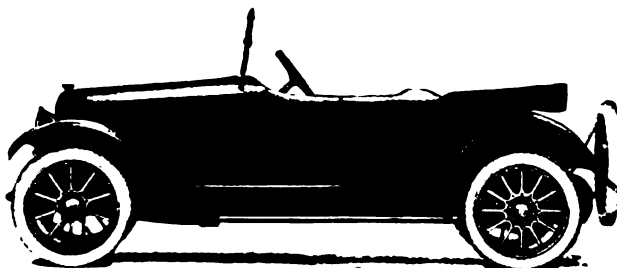
mile after mile of steepest mountain climbs—

The BRAKES holding fast on mile after mile of downward plunges—where slipping meant death—

What eloquent proof of the 100% *stamina* and *dependability* of this strictly stock ELGIN SIX.

And Economy—19.4 miles to the gallon of gasoline.

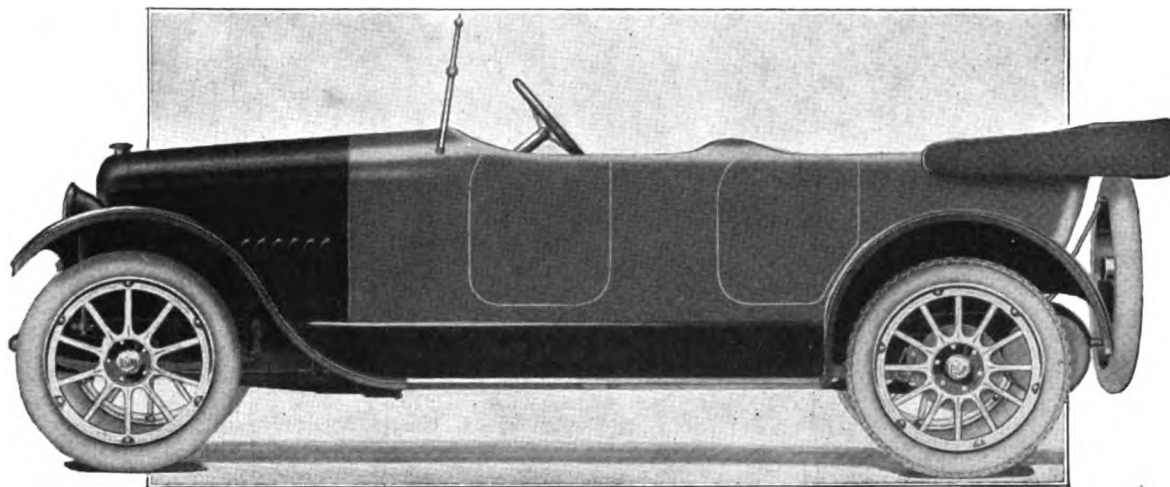
**Elgin
Six**



**Elgin Six 4-Passenger
Roadster, \$1095**
F. O. B. Chicago

A car for business and professional use, as well as for all-'round driving. Roomy enough for four people, yet not too large for one or two. Front seats divided. Beautiful yacht-line design. A popular, practical model. Same chassis as touring car, with 117-in. wheelbase, valve-in-head motor, etc.

Victory Scored



Elgin Six 5-Passenger Touring Car, \$1095

F. O. B.
Chicago

A roomy, impressive car. 117-inch wheelbase. Valve-in-head motor. Quality upholstery and finish throughout. Flexible, powerful, smooth running and easy riding. The most economical car of its size. Beautiful, durable. A family car which old and young alike enjoy.

ENGINE, clutch and transmission performed *without adjustment—without repair*—for two solid months of continuous travel under the roughest usage.

The Elgin climbed and descended the precipitous slopes of the Rocky Mountains; threading its way along tortuous, rock-strewn mountain trails; plunging through unbridged streams.

Without a break the car ran perfectly in the freezing, rarefied atmosphere above the clouds; and cooled perfectly in 132 degrees of desert heat, where heavy pulling increased the difficulty of *keeping* a motor cool.

A broken fan-belt—compelling the car to travel a thousand miles homeward *with a still fan*—a performance almost unbelievable—added a crucial test.

The record-breaking run from Chicago to Miami, Fla., the Minneapolis-Fargo dash, and many other famous ELGIN winnings had fairly earned for the ELGIN the title of "World's Champion Light Six."

Hence, when the officials of the Chicago Motor Club determined to secure authentic data on the condition of the two great national highways—The Lincoln Highway and The National Old Trails Highway—they selected the ELGIN SIX because of its previous wonderful records. It was made the "Official Scout Car," traveling under the

auspices of the Chicago Motor Club, the American Automobile Association, the Detroit Automobile Club, and many other Associations affiliated in the Good Roads Movement of America.

In the Service of the U. S. War Department

But the greatest honor was conferred upon the ELGIN SIX when Secretary of War Newton D. Baker, in a personal letter, appointed it Official Scout Car to report trans-continental road conditions to the War Department—to gather information that may prove most valuable to the War Department in emergency movements of troops and supplies.

It was a commission of honor for the ELGIN. No car had ever been sent on an errand so important to this Government. No car had ever been charged with a service so distinguished.

Successful dealers are fast coming to the Elgin Six.

A highly profitable connection may be awaiting YOU.

Wire for territory and full details.

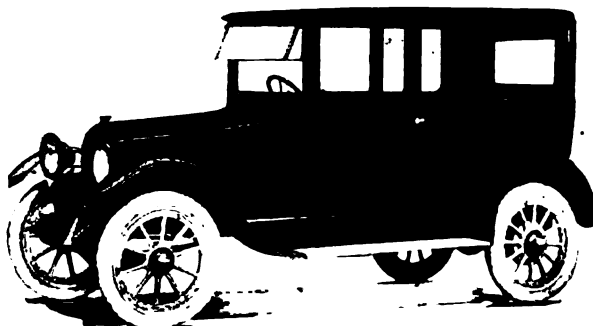
Address Dept. 25B.

Elgin Motor Car Corporation, Chicago, U. S. A.

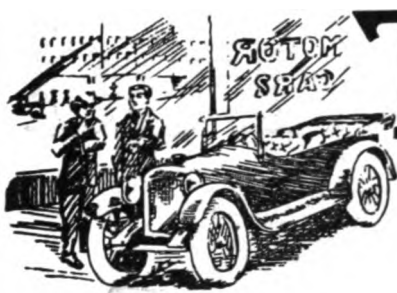
Elgin Six Sedan, \$1645

F. O. B. Chicago

A richly finished, luxuriously upholstered car that meets the all-season, all-weather requirements. Interior of best Bedford Cord. Plate glass windows. Silk curtained rear and rear quarter windows. Patented, adjustable steering wheel. Heavy Brussels carpeting for the floor. Electric dome light for interior.



Elgin Six



Trade Briefs and Factory Gossip

Firestone Holds Giant Meeting.

The Firestone Tire & Rubber Co., Akron, O., recently held its annual meeting, which was probably the most largely attended meeting of stockholders ever held in the United States. More than 95 per cent of the stockholders present were officers and employees of the company. The meeting elected directors of the company for the ensuing fiscal year and transacted other business. The meeting placed the stamp of success upon the strikingly broad and original plan adopted by the company a year ago. The activities of the tire factory stopped and the offices suspended business, releasing several thousands of employe-stockholders to attend the meeting. The meeting was presided over by H. S. Firestone, president of the company. In his report the president announced sales last year of \$61,587,219, an increase of 71 per cent over sales of the previous year. The treasurer's report showed that the company's total assets stood at \$51,633,697, with the total surplus of \$26,122,824.

Another Cog in Du Pont Wheel.

The paint and wood-finishing business of the Bridgeport Wood Finishing Co., of Still River, Conn., has been purchased by E. I. du Pont de Nemours & Co. The Bridgeport company has manufactured a line of paint and wood-finishing products for more than 40 years. The resources and organization of the Du Pont company will be put behind the Bridgeport brands to bring them before the public in a much larger way than has been done in the past. The Du Ponts entered the American paint field in an important way through their purchase some time ago of the old established firm of Harrison Bros. & Co., Inc., of Philadelphia, which under the name of "Harrisons, Inc." is now manufacturing and marketing on a more extensive scale than ever a line of well-known paints.

Johnson Helps Biggers in Hyatt Advg.

B. G. Koether, manager of the Motor Bearings Sales Division of the Hyatt Roller Bearing Co., has announced the appointment of A. R. Johnson as assistant advertising manager. Mr. Johnson will be associated with W. E. Biggers, advertising manager, in the work of advertising and sales promotion. Mr. Johnson was formerly assistant advertising manager of the Cadillac Motor Car Co., of Detroit.

Peterson King Factory Manager.

Assistant General Manager J. B. Siegfried announces the appointment of J. W. Peterson, known throughout the industry as a quality production man, as factory manager for the King Motor Car Co., Detroit. Mr. Peterson started in the business back in 1901, and was associated with Studebaker in their first gasoline venture in 1904 to 1906. He has been with Peerless, manufactured the first two Hupp-



J. W. PETERSON,
Factory Manager King Motor Car Co., Detroit,
Mich.

Yeats electrics and has had long association with Hupp. Leaving Hupp as factory production manager, he associated himself with E. A. Nelson and helped perfect and develop the Nelson car.

McGraw Tire Service Force Meets.

The McGraw Tire & Rubber Co.'s service force held a three-days' convention from November 26th to 29th. The policies to be effective in future work were defined. Furtherance of trade educational service was discussed to demonstrate the value of tire conservation. Assurances were given that tire consumers appreciated the "Care of Tires" book recently issued, which explains ways and means of lengthening tire mileage.

Duplex Truck Price Advanced.

The Duplex Truck Co., of Lansing, Mich., will advance the price of the Duplex four-wheel drive truck from \$3,600 to \$4,000 on Jan. 1. It is announced, however, that the motor truck war tax, which approximates \$100, will be paid by the company. In announcing the advance in price on the 3½-ton truck, President H. M. Lee pointed out that during the past year manufacturing costs have increased tremendously, raw material advancing from 10 to over 100 per cent, workmen's wages rising, and everything entering into the manufacture of motor trucks costing more than six months ago.

* * *

Champion Plug Enjoys Best Month.

The Champion Spark Plug Co., Toledo, O., enjoyed during last November the greatest volume of business for any month in its history. The increase over the best preceding month in the history of the sales of Champion spark plugs was 25 per cent. In addition, orders for the month of December are as large as those for the best preceding December in the company's history. Present indications are, however, that the increase of 25 per cent will be maintained. The company has expanded its selling organization and has enlarged its advertising appropriation.

* * *

Federal Truck Adds Again.

The Federal Motor Truck Co., Detroit, will erect a two-story brick and steel factory with dimensions of 95x308x34 feet. A large part of the new addition will cost about \$45,000 and will probably be used for the manufacture of class B trucks under government contract. This is a continuation of the general expansion of the company within the last year in order to take care of the increased production. Recently a large addition was built for office quarters, but when ready for occupation it was turned over to production.

* * *

Saxon Light Truck Being Delivered.

The Saxon Motor Car Corp., Detroit, has commenced delivery to its dealers of a light 500-pound delivery car built on the standard six-cylinder Saxon passenger car chassis. The price is \$850. Either panel body or open body with curtains is supplied. The chassis is slightly heavier and has been strengthened at points which will enable it to meet heavier loads.

Selden Trucks



Selden Accomplishment

SELDEN TRUCKS have checked waste and increased profits in many industries. Their big, powerful construction, low fuel consumption and low upkeep cost have enabled them to accomplish unusual feats of endurance at rock bottom cost to the user.

for instance

South Bloomingville Hill in the southeastern part of Ohio is considered to be the worst hill in the state over which to transport a load. Frequent washouts and protruding rock ledges make the road-bed of this hill very uncertain. The average grade is $7\frac{1}{2}$ percent for about eight-tenths of a mile; and in stretches of 200 feet or more the grade ranges from 16 to 18 percent. The hill is about 4600 feet from base to summit.

For years the only method of transporting a load over this hill was by horse or ox-driven vehicle—until a big, powerful five ton Selden Truck came along, carrying

a five ton load of gravel, and climbed over this *worst hill in the State of Ohio* without a sign of a struggle—and still more remarkable—without even heating the motor.

Accomplishments such as this are frequent accomplishments of Selden Trucks—for they are built for the big jobs.

Light Delivery, 1, 2, $3\frac{1}{2}$, 5 Ton Worm and Internal Drive Models. Write for full information on the model that will effect economies in your business.

DEALERS: *Write for your territory before it is closed.*

Selden Truck Sales Company

Rochester, N. Y., U. S. A.

RALPH HAMLIN, Distributor
1040-44 So. Flower Street
LOS ANGELES, CAL.

E. E. GERLINGER, Pac. Coast Div. Mgr.
Gerlinger Building
PORTLAND, OREGON

HARTMAN MOTOR SALES AGENCY
1052 Geary Street
SAN FRANCISCO, CAL.

Flanders Resigns Maxwell Presidency.

Walter E. Flanders, president of the Maxwell Motor Co., Inc., Detroit, has resigned that position and will become chairman of the board of directors. W. Ledyard Mitchell was named to succeed Flanders as president. James C. Brady, former chairman of the board of directors, will continue as a director of the Maxwell company. The change was made to relieve Mr. Flanders of some of the numerous details of management, which have greatly increased since the Maxwell company took over the Chalmers company.

* * *

Inter-State Prices Rise.

The Inter-State Motor Co., of Muncie, Ind., has raised the prices on its models. The new price range on the line of cars manufactured by the company now runs from \$950 to \$1,025, the increase becoming effective Dec. 1. The former range of list prices ran from \$850 to \$950.

* * *

Gordon is Selden President.

George C. Gordon has been elected president and treasurer of the Selden Truck Sales Co. The other officers of the company are W. C. Barry, Jr., vice-president; E. B. Osborn, assistant treasurer; and R. H. Salmons, secretary.

* * *

Hill-Smith Have Wire Wheel License.

The Wire Wheel Corporation of America, with general offices at Buffalo, N. Y., and which has exclusive control of the Cowles basic patents on demountable and interchangeable wheels, has granted a license to the Hill-Smith Metal Goods Co., of Boston, Mass., to manufacture and sell the "Minute" demountable wheels for Ford cars.

* * *

Stanley Steam Car Prices Raised.

New prices on Stanley Steam cars are now in effect, as follows: Seven-passenger touring car, formerly \$2,300, now \$2,500; five-passenger touring car, formerly \$2,200, now \$2,400; three-passenger roadster, formerly \$2,200, now \$2,400.



RAY LONG
Chief Engineer Columbia Motors Co.,
Detroit, Mich.

New Men at Head of Dart Truck Co.

H. H. Henry, who has recently been elected president and general manager of the Dart Motor Truck Co., Waterloo, Ia., was at the head of the new Maxfer Company in Chicago, and put it on its feet and on the way to permanence. Seeing a broader field in the Dart Motor Truck Co., Mr. Henry accepted an offer from that company, and is now in active management. He has just announced the appointment of Milo D. Herron as general sales manager. Mr. Herron was formerly connected with the Federal Motor Truck Co., New York branch, and later with the Thomas Auto Truck Co., of Waterloo, Iowa.

* * *

Sommer Will Aid Allen Gen. Mgr.

L. A. Sommer has been appointed vice-president and assistant general manager of the Allen Motor Co., Fostoria, O., in charge of engineering and production.

Willys-Overland's New Sales Plan.

Willys-Overland, Inc., through Edwin B. Jackson, vice-president in charge of sales, has just announced a new plan of organization of the company's sales department, made to bring the facilities of the factory into closer touch with the dealer organization. Under this system, the company's sales policies will be carried out on the division basis, for which purpose the country is divided into seven divisions, in each of which will be stationed a resident division manager, with full power to act for the company. J. I. Handley will be manager of the East Central division with headquarters at Toledo; A. C. Barber will manage the West Central division, with headquarters at Moline, Ill.; William L. Colt will be at the head of the Eastern division, with headquarters in New York City; George H. Cox will have charge of the Mid-Western division, with headquarters at Kansas City, Mo.; F. C. Riggs will manage the Western division, with headquarters at San Francisco; E. N. Culver the Southern division, with headquarters at Atlanta, Ga., and C. M. LeRoux the Northwestern division, with headquarters at Minneapolis. George M. Berry, formerly director of branches, and K. R. Jacoby, formerly assistant sales manager, will be associated with Vice-President Jackson in the capacity of assistant commercial manager. The branches of Willys-Overland, Inc., under this new arrangement, will come under direct supervision of the vice-president in charge of sales through the division managers.

* * *

Sarver Heads Scripps-Booth.

A. H. Sarver, who has acted as general manager for the Scripps-Booth Corp., Detroit, for several months, has been elected president of the company, where he succeeds Clarence H. Booth, who has relinquished active control. At the same time A. P. Sloan, Jr., has resigned as a director and has been succeeded by Fred W. Warner, vice-president of the General Motors Corp. Thomas Warner has also resigned from the directorate in favor of Edward Ver Linden, president of the Olds Motor Works. Sarver, the new president of the company, has long been connected with General Motor activities and was recently with the Buick branch in Pittsburgh, Pa. The new appointments are a part of the operations whereby the Scripps-Booth company will be closely linked with the General Motors Co., by which company it has been taken over.

* * *

Splitdorf Sells Munger Rings.

Munger piston rings will be marketed by the Splitdorf Electrical Co., Newark, N. J., to the retailer and to the manufacturers from the company's branches located throughout the country. According to E. A. Kelland, manager of the company's Detroit office, all of the arrangements for the new sales connection have been completed.



THE DIXIE FLYER OFFICIAL NEWSPAPER CAR

which led the Government truck test, which was staged between Atlanta, Ga., and Fort Oglethorpe, at Chattanooga, Tenn., on October 30th, 1917. The car carried four persons and during the trip of 268 miles averaged 22 miles to the gallon through the sand and over hills. It took the entire road on high and outclassed many of the higher priced cars following.

A DrideK LEATHER TOP WILL NOT SCRATCH OR CHAFE
WILL HOLD ITS COLOR AND APPEARANCE
AND IS GUARANTEED ABSOLUTELY WATERPROOF



The Most Remarkable Top Material Yet Produced

When you put a **DrideK** leather top on your car, you cover it with a character and distinction that produces an increased value, and puts your car in the class where it belongs.

DrideK tops are being put on many of the *best* cars. If you don't know all about **DrideK**—get samples and prices at once.

L. J. MUTTY COMPANY
BOSTON, MASS.

SCOVEL IRON STORE COMPANY, *Pacific Coast Agents*
SAN FRANCISCO and LOS ANGELES, CAL.



REPUBLIC TRUCKS SOLVE BIG DELIVERY PROBLEM.

Transportation problems are being solved everywhere by the motor truck. In Chicago the disappearance of the great horse-drawn trucks from the street is everywhere remarked. In their place are the big trucks bearing loads that would have taken many teams of horses in the old days. And the trucks make the trips to the freight depots and delivery points in as fast time as the speed ordinances allow, thus conserving both time and men. The illustration shows two of Sears-Roebuck's Republic fleet. These are 3 1/2-ton trucks, engaged in the parcel post delivery for the big mail order house.

Maxwell Earnings Run Ahead of 1916.

Net earnings of the Maxwell Motor Co., Detroit, were greater during the period from August to October than those of the same months of last year. During these months the company's dividend requirements of \$980,000 were covered with a substantial surplus. The payment of dividends on the second preferred stock will not be resumed for some time, since a strong working capital is required for the war business after being added to the regular line. Dividends on first preferred stock will probably be paid at an earlier date.

* * *

Brandimore With Mitchell Motors.

Jay C. Brandimore has been appointed special factory representative of the Mitchell Motors Co., Inc., of Racine, Wis. Mr. Brandimore, who assumed his new duties at Racine, Wis., only recently, was formerly connected with R. C. Rueschaw, vice-president of the Mitchell Motors, at the Reo Company, for seven years.

Dixie Advances Prices.

The Dixie Motor Car Co., Inc., Louisville, Ky., recently made announcement of advances in the prices of its cars. In accordance with the new list prices now in effect the touring car and roadster are both sold at \$995 f. o. b. factory, and the sedan model at \$1,375 f. o. b. factory.

* * *

Stromberg Pays Dividend.

The Stromberg Carburetor Co. of America, Inc., Chicago, has declared its regular quarterly dividend of 75 cents a share on its capital stock. The dividend will be paid January 2 to stockholders of record on December 15.

* * *

Pierce-Arrow Cars Will Be Continued.

The Pierce-Arrow Motor Car Co. will continue the production of passenger cars, unless required by the government to devote all of its facilities to government work. According to the company's recent announcement, it has increased its facilities for a greater output.

Duplex Earns \$92,000 in 5 Months.

Net profits of the Duplex Truck Co. since Nov. 23, 1916, when the corporation was reorganized, to Oct. 31, 1917, were \$92,002.10, according to the report of Secretary-Treasurer G. W. Hewitt, made public at the annual stockholders' meeting in Lansing, December 18. The following directors were re-elected: H. F. Harper, Elgin Miffen, H. E. Bradner, G. W. Hewitt and H. M. Lee. During the past year the Duplex company has moved from its former factory in Charlotte to Lansing, and manufacturing operations have been handicapped. President Lee declared that the financial report in reality represented but five months' actual business, owing to the time necessary for the reorganization of the manufacturing end, moving the plant from Charlotte to Lansing, getting the engineering work accomplished, procuring material and creating an efficient dealers' organization.

* * *

Industry Needs Its Expert Men.

The automobile industry is sure to prosper despite the war, but in order to win the war the industry must not be crippled by taking expert mechanics from the factory to fill unimportant places in the government service, was the general opinion expressed at the recent meeting in Detroit of more than 300 members of the Motor and Accessory Manufacturers' Association. It was pointed out that manufacturers of motor parts, accessories and the like are playing an important part in the war and mechanics of experience are required to manufacture these products. Some of the speakers who addressed the meeting were Hugh Chalmers, Christian Gird, William E. Metzger, Alvan Macaulay, Albert Champion and W. O. Rutherford.

* * *

\$1,000,000 Added to Jones Capital.

Harmony and evidences of progress predominated at the special stockholders' meeting held December 6th by the Jones Motor Car Co., at Wichita, Kan. The meeting was attended by more than a hundred of the 1,000 stockholders. The purpose was to vote an increase in capitalization. The stockholders voted unanimously to increase the capital stock from \$500,000 to \$1,500,000. With this increased working capital the company will be in position to make rapid strides toward big production. President J. J. Jones presided at the meeting and made a short talk concerning the company's progress and program. He was commended by the stockholders for his earnest efforts in the company's behalf. According to those who know the conditions, the future for the Jones Six is brighter every day.

* * *

New Plan for Boyce Moto-Meter.

The Boyce Moto-Meter will be marketed after Jan. 1, 1918, through jobber and dealer houses. Hitherto this device has been handled by a few large distributing houses.

MEET MORGAN ROSS

at the

BELLEVUE HOTEL

SAN FRANCISCO



GEARY AT TAYLOR STS.

The Bellevue has well been termed "more comfortable than home," because it has the spirit of good service and all the facilities that produce it. The name of Morgan Ross is inseparably associated with super excellence of hotel keeping and completes the assurance of perfect satisfaction.

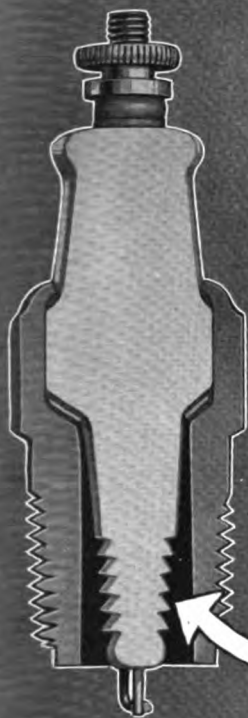
—Accessible—Every downtown attraction within four minutes walk.
 —Comfortable—300 superior rooms with bath. —Enjoyable—a table of unusual excellence. —Reasonable—Very moderate rates. Commendable
 —Real personal service. American plan from \$4.00. European plan from \$2. Wire or write for reservations. MORGAN ROSS, Manager.

Announcing The New A.C. Carbon Proof Spark Plug

Here is the first plug made which will not accumulate carbon! It will permanently rid motorists of that trouble which has been their bugbear in the past.

This New AC has been tested for a year on a number of cars and tractors using both gasoline and kerosene in which ordinary plugs would "soot up" rapidly. The perfect results obtained by this new AC have exceeded our highest expectations.

At Last Ford, Overland and Studebaker owners—this is the plug you have wanted to keep your motors hitting on all cylinders all the time.



Price \$1.00

The Reason

A deposit of carbon on the smooth surface of the porcelain is what causes short circuit. In this new AC plug the carbon proof porcelain is provided with a number of ribs having saw tooth edges. These attain a sufficiently high degree of heat to burn away the carbon thereby keeping the edges free from deposits and breaking up any possible short circuit.

Dealers: To secure your share of AC Carbon Proof business, order now and be sure of quick delivery.

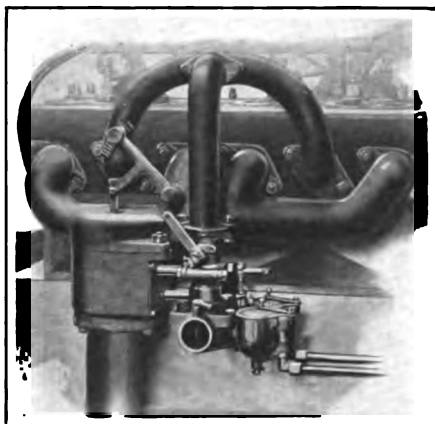
AC *The Standard Spark Plug of America*

CHAMPION IGNITION COMPANY
Sole Manufacturers Flint, Michigan



NEW HOLLEY KEROSENE CARBURETOR.

The Holley Kerosene Carburetor, Model 230R, which is manufactured by the Holley Bros. Co., Detroit, Mich., is designed to use kerosene, distillate, gasoline, benzol or any mixture of these. Where heavy fuels are used, the motor is warmed up on gasoline. Two float chambers and a con-



HOLLEY KEROSENE CARBURETOR ATTACHED TO MOTOR.

venient shifting cock are provided for this purpose.

A distinguishing feature of this carburetor is the thorough vaporization of the fuel without excessively heating the charge. This is accomplished by changing the kerosene to a gas, then mixing it with cold air. After passing the metering jet, the fuel, together with a small quantity of air, is drawn through a vaporizing tube heated by exhaust gases. This reduces the liquid fuel to a gas, which is introduced at the throat of the venturi. It enters the main air stream at the point of highest velocity, which results in a very intimate mixture.

In practice, motors equipped with this carburetor show excellent performance. The economy is as high as, or higher than when using gasoline in standard carburetors. The combustion is clean and smokeless and there is no excessive carbon deposit. It is desirable to lower the compression slightly in order to prevent preignition, which is an inherent characteristic of kerosene.

MASON CO. TO PLACE CORD TIRE ON MARKET.

For the year 1918 the Mason Tire & Rubber Co., Kent, O., expect to add new lines to its present list. It will continue making the Mason Fabric Tires in the Lattice Non-Skid tread, Ribbed tread and Smooth tread in all their various sizes and styles, as well as both gray and red inner tubes.

Early this year there will be placed on the market the Mason Cord tire. This tire has been made up and is now being tested. It will be made with a special tread design consisting of an inverted

"M." This will form a rugged tread and will be a very effective non-skid.

The company is adding to its line at the present time a semi-cured tread band for the retreading of tires. This tread band will be in shape to offer to the market within the next few weeks. The company is also contemplating, as soon as added factory space will permit, the manufacturing of a full line of accessories, including hook-on and laced boots, double wing blowout patches, tire plasters, reliners, tread gum, cementless patches, and in fact a full line of sundries of all kinds.

The company is also getting up a line of repair materials, including tread gum for both gray and black repairs, cushion gums, repair fabrics and a full line of cements. All the above lines will be on the market within the first two months of 1918.

There will be no radical changes in the lines now being manufactured, except that the Lattice Non-skid tread and Ribbed tread molds are being recut so as to eliminate the high crown. This will give Mason tires a greater wearing surface on the road and distribute the wear equally to all parts of the tire.

In recutting the molds it has been found that in the 30x3½" Ribbed tread 1 pound and 13 ounces more stock is being added than formerly. This increase in the amount of stock put into Mason tires graduates up to the 37x5 Lattice Non-skid tread. To the 37x5, 3 pounds and 7 ounces more material have been added. These changes in the present output of the Mason factory have been made after extensive tests on test cars.

FOULESS SPARK PLUG KEPT CLEAN BY ROLLING BALL.

The Fouless Spark Plug is kept clean by an adaptation of the old method of cleaning a bottle—dropping in shot or marbles and then shaking it. Instead of one or more small separate wire terminals, the end of the Fouless is formed in the shape of a slotted chamber or cage and in this cage is a movable ball, kept in continuous motion by the natural vibration of the engine and the car. The inner wall of the cage is so designed that no matter what the position of the ball may be, it is always the same distance from the electrode. This continual movement keeps the terminals absolutely clean and clear of any oil or carbon. The great feature of economy is claimed for the Fouless Spark Plug is its ability to act as an energizer and intensifier. It gives a double spark and fires a leaner mixture. The first spark leaps from the center of the electrode to the ball, as in all other spark plugs. Differing from all other plugs, however, the Fouless has a second spark, greatly intensified, which leaps from the ball to the terminal. As a result of these advantages the Fouless is, as the makers declare, a two dollar spark plug. It is manufactured by the D & D Co., Chicago, Ill., and is sold for \$2 apiece.

BLACKLEDGE INTRODUCES VELVET RECOIL DEADENER.

The John W. Blackledge Mfg. Co., 341 East Ohio street, Chicago, makers of the famous Velvet Shock Absorbers, is bringing out a patent recoil check to check the up-throw on the fronts of automobiles and on the rear of cars with cantilever springs, and on other cars that violently rebound



CUT-OUT VIEW OF THE VELVET RECOIL DEADENER.

when they strike bad bumps or holes in the road.

The device will be known as the Velvet Recoil Deadener. The idea is new in automobile shock absorbers. It works positively and quickly and yet gradually deadens the shock on the recoil of the spring. The device answers an entirely different purpose from that of the cushion-type Velvet Shock Absorber, which the Blackledge Co. has been making for several years, the function of which is to make a stiff main spring ride "soft and easy." The Velvet Recoil Deadener checks the up-throw of the car and makes the car ride easy.

As will be seen by reference to the illustration, the cam A is fastened, stationary, on the pivot bolt B. The drum E revolves on pivot bolt B. The spring C is fastened to the inside of the drum E and when the car goes upward the drum E revolves on pivot A and the spring C travels up on cam A and immediately begins the gradual stopping of the up-throw of the car. On the opposite side of the device, another spring winds the drum up and the spring C immediately slides down on the cam as the body of the car returns to normal position.

The Velvet Recoil Deadener is expected to be on the market within a few weeks.

Chicago Show Issue—January 15th.
San Francisco Show Issue—February 15th.



HOTEL ST. FRANCIS San Francisco

Center of the City's Life and Color

EUROPEAN PLAN FROM \$2.00

Management - James Woods



ARE YOU ECONOMICAL?

Not the least of your expenditure is for fuel—don't waste any.

Economy is an advantage gained, both in low fuel consumption and regular engine firing, by users of

BOSCH

MAGNETO IGNITION

Bosch Magneto Co. - - New York

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Coast Distributors: E. A. Featherstone, Los Angeles
Ballou & Wright, Portland and Seattle
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Accelerates



The Gasoline of Quality

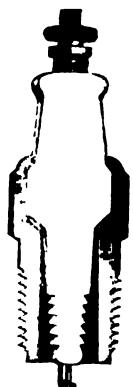
Medium boiling points---the middle links of the continuous chain ---give quick and smooth acceleration.

Standard Oil Co.
(California)



NEW A C CARBON-PROOF SPARK PLUG.

The Champion Ignition Co., Flint, Mich., which manufactures A C Plugs, has placed on the market a new type known as the A C Carbon-Proof, of which a sectional view is shown herewith. This new plug



SECTION OF
A C CARBON-
PROOF PLUG

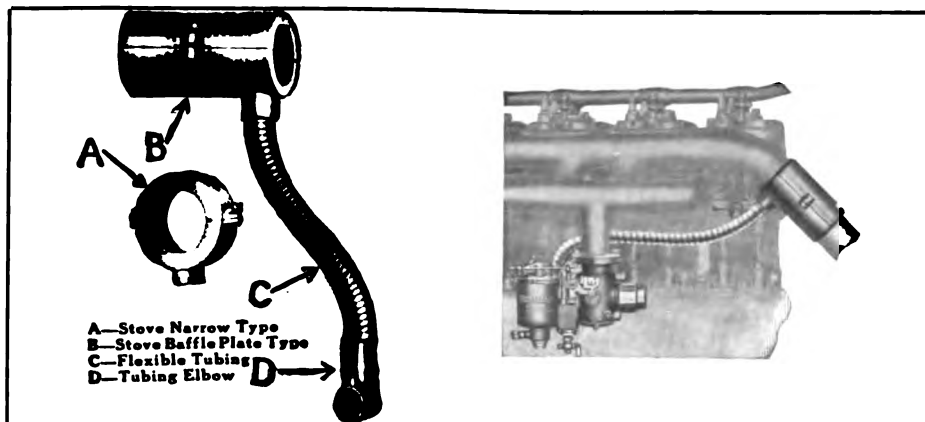
was designed primarily to overcome the carbonizing trouble being experienced in a very well-known make of tractor that uses kerosene as fuel. The results were so exceedingly gratifying that it was decided to give motorists the benefit of this invention, which marks a new departure in spark plug construction. It is made for Ford, Overland and Studebaker cars and it is said by the manufacturers that, in tests on Ford cars covering a period of one year, no instance has been found where a plug had to be removed on account of carbonizing. The reason for this is that the carbon-proof porcelain is provided with a number of ribs having saw-tooth edges which attain a sufficiently high degree of heat to burn away the carbon, thereby keeping the edges free from deposits and breaking up any possible short circuit.

HEINZE-SPRINGFIELD ELECTRIC STARTING AND LIGHTING SYSTEMS.

The Heinze-Springfield Electric Starting and Lighting System is designed especially for Ford cars and is a two-unit, six-volt system with Bendix drive. It can be installed complete in four hours by anyone familiar with ordinary tools. The two-unit principle, light weight and low generator speed, eliminates excessive power drain on the engine. All parts are furnished for complete installation and include ammeter, dash lamp and electric tail light. Heinze-Springfield Systems are distributed on the Pacific Coast by Hughson & Merton, Inc., with branches in the principal Coast cities. They are manufactured by the John O. Heinze Co., Springfield, O.

RAYFIELD DEVICE CONSERVES GASOLINE.

Millions of gallons of gasoline are needlessly wasted during the winter months, due to the fact that automobile owners and operators of all kinds of gasoline motors persist in their endeavor to run their machines with cold gasoline. It can be done, but in so doing the cost is great and troubles are many.



RAYFIELD DEVICE FOR SAVING GASOLINE—IN DETAIL AND ATTACHED TO MOTOR.

The kind of gasoline in use today must be heated in cold weather to obtain efficiency and economy. The question is, "What is the best way to do it?"

Many devices are employed to get heat to the carburetor, but the original method put into practice by the Rayfield Carburetor manufacturers has proven to be the best and easiest way. A stove or housing is clamped around the exhaust pipe or manifold and is so constructed that the air passing through it is heated to a high degree of temperature. The heated air is then drawn through flexible tubing to the fixed air intake of the carburetor, and in the Rayfield it comes in direct contact with the gasoline at the nozzle opening, the result being instant action and perfect vaporization.

The installation of this device is very simple and inexpensive, yet has proven to be a money-saver and friend in need to many thousands of motorists during the winter months.

QUALITY TIRES AND INNER TUBES.

Quality Tires are built with non-skid construction only. The highest grade of rubber enters into the construction of this tire and all the fabric is tested for strength and then milled and calendered so that every particle of fabric receives the same amount of rubber. Every process is closely watched and each tire is thoroughly examined at eighteen different points during construction. Quality Inner Tubes receive the same care and supervision during manufacture as is Quality Casings. Each tube is rigidly inspected before leaving and is packed in such shape that it reaches the consumer in the same perfect condition in which it left the factory. Quality Tires are handled under exclusive territory rights and 40 per cent is allowed to the dealer off the list price by the Quality Tire & Rubber Co., 1467 Michigan Ave., Chicago, Ill.

EMERGENCY LEVER CONTROLS BOTH BRAKES IN NOBLE SAFETY BRAKE.

In the Noble Safety Brake for Ford cars the emergency brake controls the foot brake, gripping two sets of brakes in one operation. For quick emergency stops the simultaneous grips on the foot brake bands and the rear wheel brake drums assure a positive action without a sudden jar of the car and unnecessary skidding and wear of the tires by equalizing the brake resistance in the center and rear end of the car. A car can be left standing or started on any grade without danger of moving. The Noble Safety Ford Brake is manufactured by the Hughes Mfg. Co. of 1806 S. Michigan Ave., Chicago, Ill.

HOVEY AUTO JACK OPERATED BY FOOT.

The Hovey Auto Jack, manufactured by J. H. Whetstone & Co., Lapeer, Mich., operates on the entirely new mechanical principles of the "wheel and axle" and the "shifting fulcrum," as opposed to the



THE HOVEY FOOT JACK.

conventional principle of the lever or screw used in other jacks. The Hovey Jack will jack up any wheel in a second's time. It operates by merely kicking up the movable head and depressing the handle, and locks by gravity. Adjustment is made with the foot, not the hands, the four-foot handle affording ample leverage. The Hovey Jack is sold for \$7.

ARMSTRONG TUBES INCREASE TIRE MILEAGE BY 30 PER CENT.

Armstrong Tubes are manufactured by the Armstrong Rubber Co., Inc., 118-22 Adams St., Newark, N. J., from the best pure rubber obtainable and are equipped with the Kahn automatic valve. They can be inflated to any desired pressure without using tire gauges or accessories of any kind and will give warning when a desired pressure is reached. There is no fear of over-inflation when a power pump is used. Air cannot escape when the pressure is increased while running. The manufacturers claim 30 per cent more mileage from tires by keeping them properly inflated with the use of the Armstrong Tube. It is distributed upon the Pacific Coast and the adjacent plateau states by John Jay Ross, 607 S. Figueroa St., Los Angeles, Cal.

LIBERTY AXLE FOLLOWS U. S. SPECIFICATIONS.

The Liberty Axle, manufactured by the Wagner Axle Co., Anderson, Ind., is a worm-drive axle embodying the proven principle of worm-drive construction used in the past with the use of the M. & S. differential, thus conforming with the United States government specifications for rear axles to be so designed that both rear wheels should always have traction. All rotating parts are mounted on suitable ball bearings easily adjusted. The drive shaft ends are properly fitted and connected with splines to the gears in the differential case. The axle housing is of cast steel, the gear of special phosphor bronze and the differential case of cast steel. The brakes are dual internal double-expansion construction and the brake drum is so arranged as to preclude the admission of dirt.

COCHRAN SPEEDNUT WRENCH ELIMINATES THUMB SCREW.

The Cochran Speednut Wrench has no slow thumb screw adjustment, but a quick, tight grip on all nuts. The rapid operation is due to the fact that the wrench works on the nuts through ratchets. It occupies less space in repair kits than double end and screw wrenches. The simple construction is made up of only three pieces. The Cochran Spring Oilier reduces shock and spring breakage by lubricating between the leaves of the spring. Both these devices are manufactured by the Cochran Pipe Wrench Mfg. Co., 7800 Woodlawn Ave., Chicago, Ill.



LANE'S "H-C" JACK

Easily Operated. You Keep Clean.
Absolutely Dependable.

HANDLE IS JOINTED IN THE MIDDLE FOR
STORING AWAY

PLACED
OPERATED
REVERSED

by one hand from end of handle

No. 14, Lifts 1800 lbs. \$4.50
No. 16, Lifts 3000 lbs. \$6.00

At All Supply Stores, or Prepaid to You
Upon Receipt of Price

LANE BROS. CO., - POUGHKEEPSIE, N. Y.

PISTON SERVICE



Light Weight, Any Make

Cast Iron Pistons

Are the BEST by TEST

FINISHED

SEMI-FINISHED

or ROUGH

LARGEST PRODUCERS IN THE WEST

W. H. JAHNS AUTO MACHINE WORKS

908-912 West Pico St.

Los Angeles, Cal.

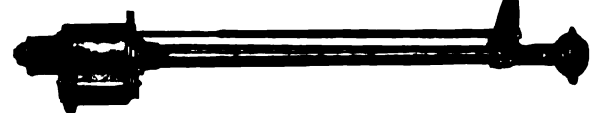
Starting on a Grade

CRUMP'S FORD TRANSMISSION
-AUXILIARY-

Ford trucks with only Ford two-speed control are inefficient. Crump's auxiliary adds, with shift lever control, a powerful low, slower than the Ford low, to start easily on any grade; an intermediate and a positive neutral. These three added points give the Ford truck the flexible power range essential to efficiency. Underdrive for trucks and overdrive for pleasure car. "Gears-in-mesh" make easy shifting, no stripping and quiet running. Positive neutral makes easy cranking.

Vanadium steel shafts, ball bearings, hardened and ground gear steel. Equipment that is built to outlast its companion parts.

WRITE FOR ATTRACTIVE DEALER
OFFER.



Sole Manufacturers and Distributors

L & B TRUCK MANUFACTURING CO.

1416 S. LOS ANGELES ST.,
LOS ANGELES, CAL.

CUSHIONS YOUR CAR ON AIR—THE GRÜSS AIR SPRING

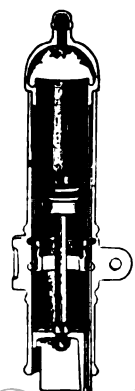


1918 HUDSON SUPER-SIX EQUIPPED WITH GRÜSS AIR SPRINGS
THE LUXURY SHOCK ABSORBER

Skimming on air—a ton weight held delicately as a feather, poised securely upon four air cushions—this is the Grüss equipped car. No sway; curves taken with quiet safety; a column of compressed air on one side checked by a vacuum on the other holding the car at an even level. With Grüss equipment the quality car owner shares the bird's smooth flight.

CARTER & VANBERG
SERVICE STATION

775 Towne Ave. Broadway 8306 Los Angeles



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Atlas	Diamond	Haynes	Marathon	Palmer-Singer	Stoddard-Dayton
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Auburn					Stutz
Badger					Sphinx
Bergdoll					Standard
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Coreja	Federal	Kelly	Moline	Regal	Zimmerman
	Firestone	King	Moyer	Republic	

GEARS AND PARTS

Above is a partial list of cars for which we carry transmission and rear axle parts. Gears for 150 makes and 650 models

WRITE FOR OUR CATALOGUE OF MONEY SAVING PRICES

1312 S. Hope St., Los Angeles
1461 Michigan Ave., Chicago

AUTO GEAR AND PARTS CO. 844 Eighth Ave., New York
291 Marietta Ave., Atlanta



HARD TEST FOR PALMER TUBES

SCHRADER TIRE PRESSURE GAUGE FOR MOTOR TRUCKS.

In addition to the full line of accessories manufactured by them and including Schrader Universal Tire Valves, Tire Pressure Gauges, Tire Pump Connections, Tire Valve Repair Tools and automatic shut-off valves for free air stations in garages, the firm of A. Schrader's Son will exhibit at the National Shows a Tire Pressure Gauge for motor trucks. As shown in the accompanying illustration, the new gauge has a bent foot or base which permits it being applied to the tire valve of tires on heavy vehicles, no matter how small the space between the hub and the felloe of the wheel. As the pressure in such tires must be very much higher than in tires on pleasure vehicles, the indicating sleeve of the new gauge is calibrated so as to regis-

ter from 30 pounds of air to 170 pounds. This will accommodate tires up to 8½ inches. As the necessity of keeping up tire inflation is even greater for commercial vehicles than for pleasure cars, the demand for the new gauge is apparent.

PALMER TUBES SURVIVE STRINGENT TESTS.

The Pacific Pipe & Supply Co., with display rooms at 839-41 South Los Angeles St., Los Angeles, recently took over the Southern California representation of the Palmer Safety Cord Tubes, manufactured by the Palmer Tire & Rubber Co., St. Joseph, Mo. A. E. Judd, manager of the department, determined to subject the Palmer tube to a most severe test. In the front tire of a Chalmers touring car four 2 inch holes were cut, and the tire pumped up to 80 pounds pressure. The car was then driven over 900 miles over Southern California without the tube blowing out. In the illustration a 165-pound man is shown standing on one of the tubes which is inflated to 25 pounds pressure. The tube is at the same time supporting the weight of the heavy car. The four holes in the tire shoe may be plainly seen. The car is to be run until the Palmer tube blows out.

THE SHALER ROADLIGHTER.

The Shaler Roadlighter is the result of long continued study and experiment by two expert illuminating engineers, during which the prime thought was the production of a smooth, broad illumination of the road without sacrificing intensity of distance light. The Shaler Roadlighter is not a dimmer. This lens is made of molded optical glass, smooth on the front and having a series of prisms on the back, so arranged that all the light is thrown



THE SHALER ROADLIGHTER.

on the road and no rays reach a level greater than 42 inches above the ground at any point while the car is standing on the level. At the same time the light is spread over the roadway, giving a broad flood-light that illuminates from ditch to ditch. In the construction of the lens a little more than half of the lower part of the lens is a series of oblique prisms that meet in the center of the glass from right to left. In the upper part of the lens are two prisms, one smaller than the other, each beveled so that one gives a strong light for long distance and the other for intermediate distances, but none of the rays can reach a level greater than 42 inches above the ground. The Shaler Roadlighter is marketed by the C. A. Shaler Co., of Waupun, Wis., which has long been a leader in the vulcanizer field. The lens comes in sizes for Ford cars at \$2.75 per pair and for all other cars at \$3.50.

Acason THE OWNER FIRST TRUCKS

This company has an attractive proposition to offer desirable distributors and dealers in Pacific Coast territory.

1½-ton Truck ..\$2100.00 3½-ton Truck ..\$3000.00
2-ton Truck 2400.00 5-ton Truck 4200.00
Light Tractor\$2500.00
Heavy Duty Tractor 3800.00

ACASON MOTOR TRUCK COMPANY
DETROIT



KELLOGG
Engine Driven
Tire Pump


"No Oil Spray With Air"—Guaranteed.
"All Metal Construction"—Everlasting.

Installation Fittings for Practically
All Makes and Models of Cars.

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U.S. SPRINGS
AS GOOD AS THEIR NAME

AUTO AND TRUCK SPRINGS WHEELS, BUMPERS FORGINGS

Wholesale Retail

UNITED STATES SPRING CO., Inc.
Successors to A. & F. SPRING CO.,
1120-22 South Los Angeles Street, LOS ANGELES.

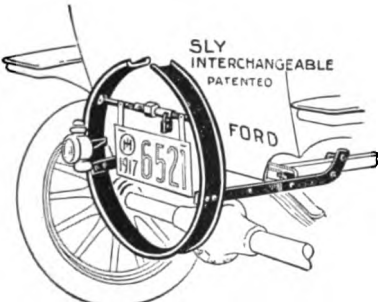
**A
P E X**
Motor Oils

THE HIGHEST POINT OF EFFICIENCY

Gasoline "with the Punch"

PUENTE OIL CO.
Oldest Refiners and Producers on the Coast

BE UP-TO-DATE ON TIRE CARRIERS



The strap kinds are obsolete and unsightly. The Sly interchangeable—Ford or Chevrolet quickly—neatly does the trick—take any casing or demountable—cost no more. Beware of imitations. If your Jobber doesn't list, write us for complete catalogue—of real Carriers and "Better Springs."

NEW ERA SPRING & SPECIALTY CO. 890 Woodward Avenue, Detroit, Mich.

MORE POWER --- LESS FUEL



SU-DIG SERIES PLUGS are the only spark plugs that produce **TWO SIMULTANEOUS SPARKS** in each cylinder when connected with the ordinary plug. The two opposed sparks ignite the mixture at two points at once. This burns the gas more than **TWICE AS FAST**, resulting in a wonderful **INCREASE IN POWER and GASOLINE MILEAGE**, and **WITHOUT ANY CHANGE IN THE PRESENT EQUIPMENT.**

Free booklet, "How to Get More Power." Write for it. Please mention car.

CHANSLOB & LYON CO.,
San Francisco, Los Angeles, Fresno, Oakland, Seattle, Portland.
WEINSTOCK, NICHOLS & CO.,
San Francisco, Los Angeles, Oakland.

SUPERIOR MOTOR POWER CO.,
38 Irving Place New York

Two Special Issues of MOTOR WEST

January 15th—Chicago Show Number
February 15th—San Francisco Show Number

Last advertising forms go to press January 14th and February 14th respectively

MOTOR WEST PUBLISHING CO.
911 MARSH-STRONG BUILDING
LOS ANGELES, CAL.

Quality in Motor Trucks

It has been our endeavor to create a commercial vehicle that would excel first of all in the quality of the material used, and second, in the economy of its operation. :: ::
Our reputation for producing the most lasting truck is recognized by our many users. :: :: :: :: :: ::

We offer for your convenience, the following sizes:
1½ Ton 2 Ton 3½ Ton 5 Ton 7 Ton

HURLBURN MOTOR TRUCK COMPANY
133d St. and Harlem River :: New York, N. Y.



PERFORMANCE

That's what the truck prospect is interested in most of all. If he knows your truck is powered with a Wisconsin Consistent Motor, a big step has been made in its sale. Wisconsin Motors are champions of the world on road and speedway—why not link their reputation to your product? Write for specifications of different types and sizes.

WISCONSIN MOTOR MFG. CO., MILWAUKEE, WIS.
Sta. A, Dept. 314.
Pacific Coast Distributors: Earl P. Cooper Co., 1428 Bush St., S. F., Cal., and 1310 S. Los Angeles St., L. A., Cal. W. F. Kenney, 68 First St., Portland, Ore. Chandler-Dunlop Co., Seattle, Wash.

Investment vs. Expense

A cheap porcelain plug is a double expense. FIRST: It needs frequent renewals on account of breakage and sooting. SECOND: It's a waster of gas and money.

HERZ PLUG



"Bougie Mercedes"

once properly installed ask only one favor of you, viz.: to leave them alone. They last as long as your pistons and crank shaft—a real investment. They insure perfect and vigorous combustion of all the gas. Let us educate you up to Herz Plugs. They're \$1.50 at your dealer's, or

\$1.50
at your dealer's
or
HERZ & CO.
245 W. 55th St., New York

WESTERN TRADE NOTES

San Francisco, Cal.—Among the most important new plants occupied during the past year by firms connected with the motor vehicle industry are the following: The Doane Motor Truck Co., new factory at 428 Third St.; the Willys-Overland Motor Co., new five-story building at Van Ness Ave. and Bush St.; Goodyear Tire & Rubber Co., new quarters on Mission near Twelfth St.; and the McGraw Tire & Rubber Co., new warehouse on Townsend St., in the wholesale district. New concerns connected with the automobile industry starting during the past year are the Brown Truck Attachment Co., 50 Eighth St.; Morgan Spring Co., 350 Golden Gate Ave., motor vehicle and wagon springs and bumpers; Sterling Auto Top Co., 635 Golden Gate Ave.; Solar Dimmer Co., 627 Van Ness Ave.; and Acme Gas Engine Co., 11 Minna St.

Chula Vista, Cal.—Harry L. Warren has purchased the Ford agency here from C. A. Sumner.

Phoenix, Ariz.—Cal Messner has taken the Empire car agency for the state of Arizona.

Colusa, Cal.—J. H. Busch has taken the agency for Nonpareil trailers in Colusa, Yolo, Glenn, Sutter and Yuba counties.

Walnut Creek, Cal.—Management of the San Ramon Valley Garage has been taken over by F. W. Teetzel. Noel Patterson retaining an interest.

Santa Cruz, Cal.—Clarence Dake and George Hart have purchased the motor car agency and garage business of the Cedar's Garage operated by Mellon & Wison.

Glendale, Cal.—Frank D. Marshall has taken over the Dodge car agency.

Santa Rosa, Cal.—M. A. LeBrun has purchased the interest of his partner, Charles Krausse, in the Grant automobile agency here.

San Jose, Cal.—W. J. Benson, Chandler dealer, has had his territory enlarged to include all Santa Clara county.

Los Angeles, Cal.—Herman Baker has taken over the business of A. C. Fuller, 937 S. Grand Ave., distributor of Invisible shock absorbers.

Lodi, Cal.—The Lodi Motor Co. has taken the KisselKar agency.

"The Light That Shows the Road"

SAFETY FIRST—BUY AN S & M



Complies with the California State Law without interfering with its usefulness in reading house numbers, road signs, etc. For sale by all Jobbers and Dealers of Automobile Accessories.

25413
S & M LAMP CO. 117 West 36th Place
LOS ANGELES



**PHILADELPHIA
DIAMOND
GRID
BATTERY**

The Best of Batteries

There may still be an opportunity to obtain selling rights in your territory if you act quickly.

Philadelphia Storage Battery Co.
BRANCHES:
1105-7-9 W. Pico St., Los Angeles, Cal.
37 Spear St., San Francisco.

**40%
Longer
Life**

FORD CAR OWNERS USE KEROSENE

(Coal Oil)

One Mile on Kerosene Costs Less than $\frac{1}{2}$ cent
One Mile on Gasoline Costs From $1\frac{1}{4}$ to $1\frac{1}{2}$ cents

BUY A DETROIT KEROSENE EQUIPMENT

Save 60% Price of Equipment \$25 f.o.b. Detroit

30 days Trial or MONEY BACK — ACT PROMPTLY!

These are days of strict economy

DETROIT KEROSENE CARBURETOR CO.

KRESGE BLDG.

DETROIT

Department 16

DENBY MOTOR TRUCKS

Pioneers of the internal-gear drive

Denby trucks are built in 1, 2 and 3 ton capacities,
and with bodies for every line

DENBY MOTOR TRUCK COMPANY
DEPT. H. Detroit, Michigan



TRUCKS

Every practical size
of truck for every
trucking need. GMC Trucks represent the finest in construction and are backed by an old, firmly-established organization. Write TRUCK HEADQUARTERS for information.

GENERAL MOTORS TRUCK COMPANY

One of the Units of General Motors Corporation

Pontiac, Michigan

Branches and Distributors in principal cities. (280)



Conforms more closely to Ford engineering and construction than any other electric starting system ever sold

A. B. C. STARTER CO. - Detroit, Mich.

"Brains In the Rear Axle"

BAILEY

Non-Stall

DIFFERENTIAL

Bailey Non-Stall Differential Corp.

1124 Michigan Avenue

Chicago, Ill.

MAKE SURE that your car will
be there when you get back

BY LOCKING IT WITH A

WALKER KE-LES

Safety-vault-like combination that cuts off battery, magneto and starter circuits, also the gasoline.

NO KEY TO LOSE — NO KEYHOLE TO FIND

\$10 for large cars (\$15 properly installed)

\$5 for Ford and other small cars (\$7.50 properly installed)

See your dealer, garage or repair man. If he does not carry the Walker Ke-Les, send us his name.

WALKER KE-LES LOCK CO.

Factory: Aurora, Ill. (Dept. M) Sales Dept. Chicago, Ill.



UNION OIL CO. OF CALIFORNIA

WHY I PICKED THE WONDERFUL BRISCOE



W. J. Dabney

"Service

—that is the spirit on which my business success is built. So, in choosing the car I should sell—I kept **service - to - my - customers** uppermost in my mind.

"I wanted the car with the most dependable motor. I wanted the car with lowest operating cost. I wanted the car that represented the highest value for the money.

"So I chose the Briscoe.

"Briscoe performance has pleased my customers. The half-million-dollar motor — the beautiful Briscoe body designs — the many Briscoe extras — these are the features responsible for my success. The dealer who sells the Briscoe can't help but make money—for the Briscoe is the light car most in demand."

W. J. Dabney Implement Co.,
Atlanta, Ga.

"The Light Car Most in Demand"

There's the key to the Briscoe dealers' success. The Briscoe franchise, for many reasons, is the most valuable the dealer can get. Worth thousands of dollars a year. Perhaps your territory is open. Address

L. E. Willson, Vice-President
BRISCOE MOTOR CORPORATION
Dept. 147, Jackson, Mich.

BRISCOE \$725
THE CAR WITH THE
HALF-MILLION DOLLAR MOTOR





Motor West

THE MOTORING AUTHORITY OF THE PACIFIC COAST



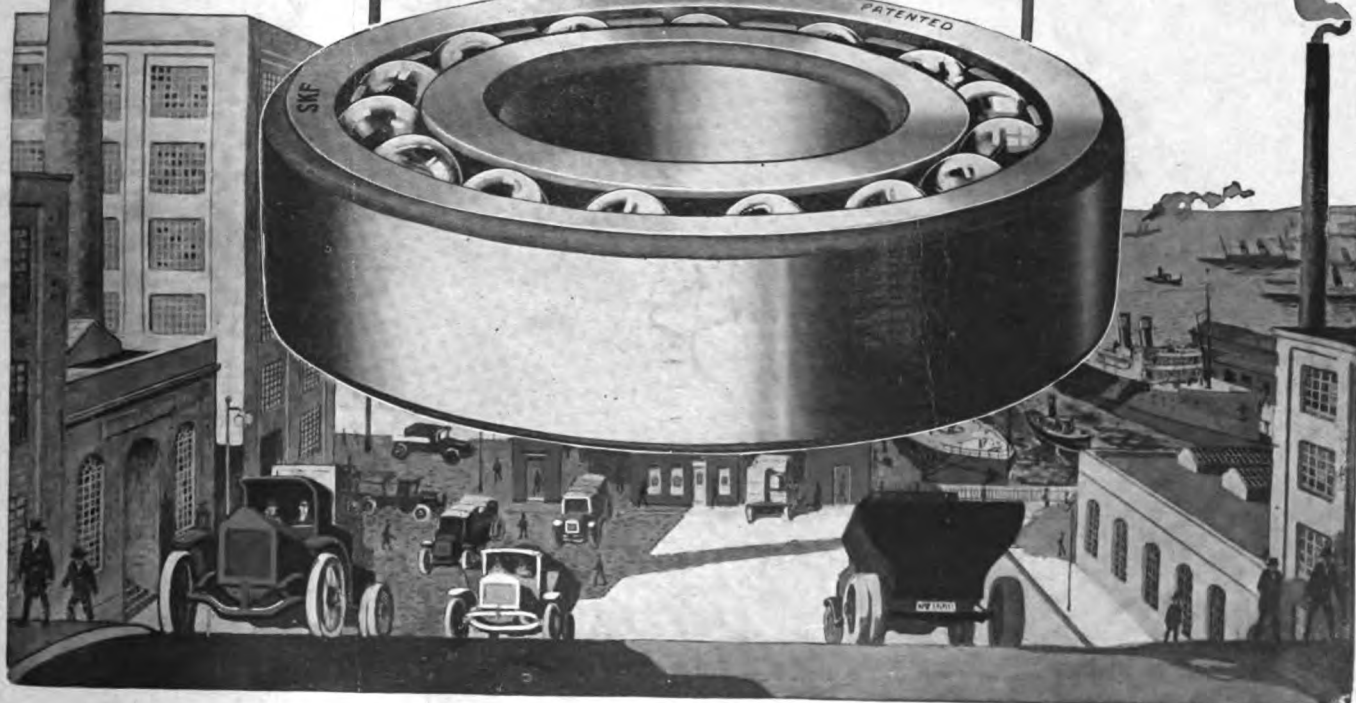
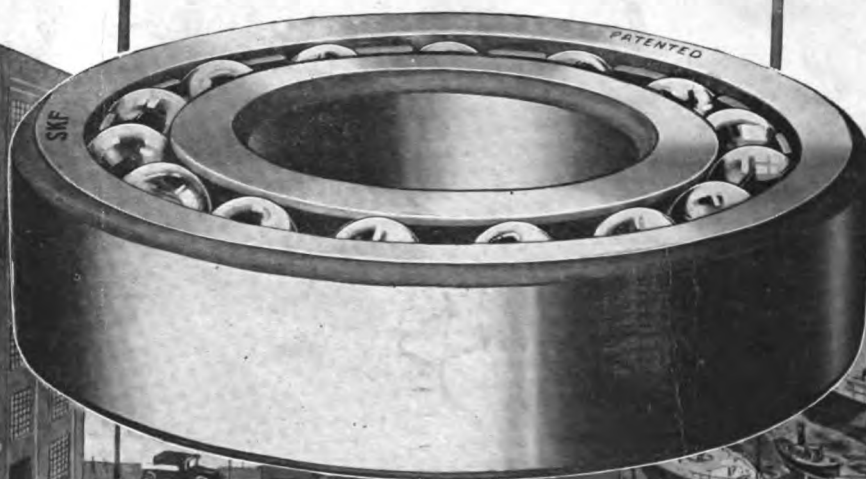
SKF

THERE is no ball bearing so universally accepted as SKF. With factories in both hemispheres and branches in every civilized country on the globe, SKF is known and used the world over.

SKF BALL BEARING CO.
HARTFORD 265 CONN.

SKF Ball Bearing Co.
of Cal. Inc., San Francisco

Canadian SKF Co., Ltd.,
Toronto, Canada





Lithe, Sinewy, Enduring United States 'Royal Cord' Tires

To know the construction of '*Royal Cord*' Tires is to know why they have held their supremacy.

The many layers of many powerful little cords in these tires,

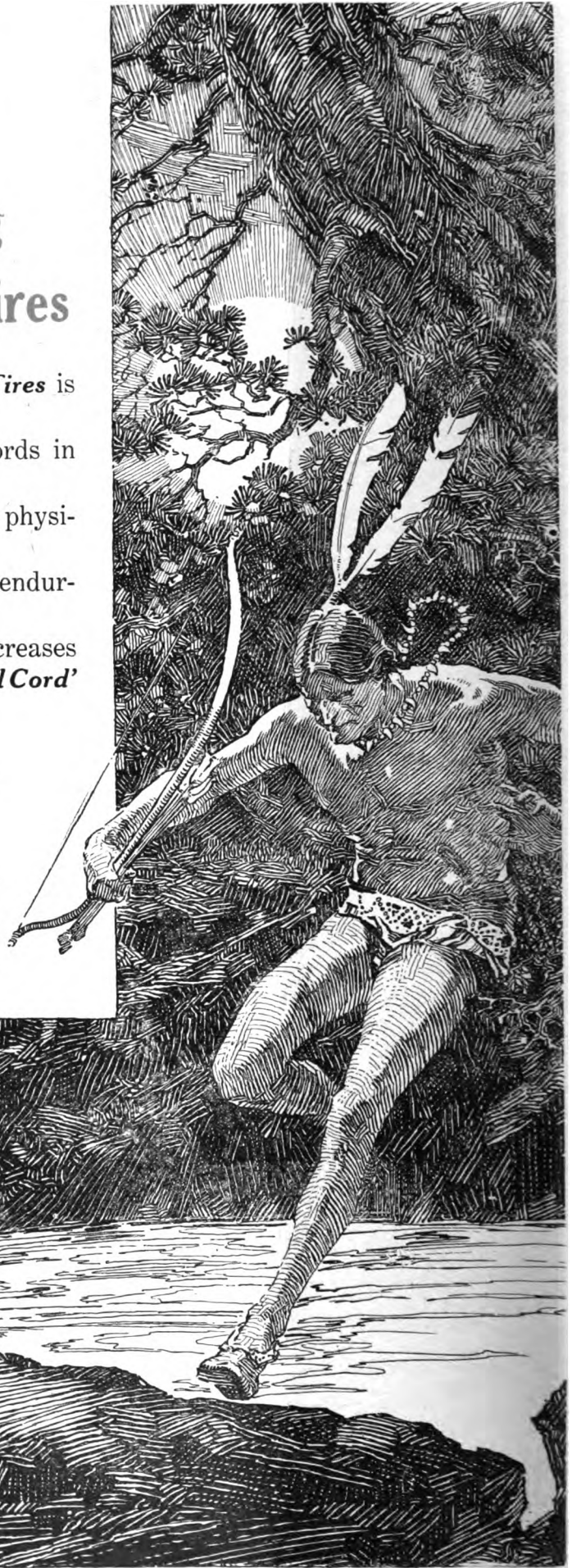
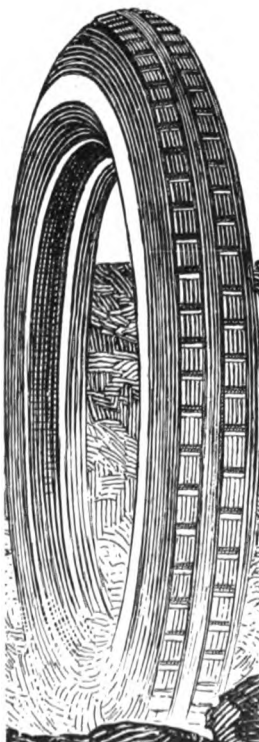
—like the lithe, sinewy, enduring muscles of a physically perfect man,

—give them the elasticity, the resiliency, the endurance which is so exclusively theirs.

Their vast, and still growing vaster, sales increases are the proof of what wise motorists think of '*Royal Cord*' Tires.

United States Tires Are Good Tires

'*Royal Cord*' '*Nobby*' '*Chain*' '*Usco*' '*Plain*'
Also tires for Motor Trucks, Motorcycles, Bicycles and Aeroplanes
United States Tires and Tire Accessories have
all the Sterling Worth and Wear that make *United States Tires* Supreme.



Mention "Motor West." Please, When Writing to the Advertiser

WHY MORE THAN 1000 REPUBLIC DEALERS LEAD THE TRUCK BUSINESS



**SEVEN
MODELS
ALL CAPACITIES
FOR EVERY
PURPOSE**

At Low Prices Republic Special chassis, \$995; Republic Dispatch for delivery purposes, \$895; 1-ton with bow top and stake or express body, \$1295; 1½-ton chassis, \$1550, will be advanced February 1st to \$1650; 2-ton chassis, \$1975; 3½-ton Dreadnaught chassis, \$2950; 5-ton Thoroughbred chassis, \$4250. All prices f. o. b. factory. We furnish every type of body. Write for book on any model. Dealers are invited to send for our liberal proposition.

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GMC trucks are built in all practical sizes, $\frac{3}{4}$ -ton to 5-ton capacity—six sizes in all. Each size better suited than any the rest for a particular class of work.

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Traffic tie-ups impose few restrictions on shippers whose short hauls are handled by GMC Trucks.

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It is fortunate that GMC Truck building has passed the point where experimenting with the fundamentals was necessary. GMC trucks have reached the stage where the vital problems of the early manufacturer are solved.

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surest means that engineering can supply.

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GENERAL MOTORS TRUCK COMPANY

One of the units of the General Motors Corporation
PONTIAC, MICH.

New York Philadelphia Boston Chicago
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Distributors Most Everywhere

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Most Profit— Most Service

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ARMLEDER

Motor Truck

2 Ton—WORM DRIVE—3½ Ton

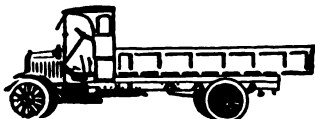
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In Charge of Western Sales
ARMLEDER MOTOR TRUCKS.

Manufactured by
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Cincinnati, O.



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Lead them all

Miller Carburetors are used by the best motor experts and on the best motors in the world.

A Miller Carburetor will do for your motor what it does for all gasoline engines, whether they are installed in Racing Cars, Pleasure Cars, Motor Boats or Aeroplanes. The Miller gives you Economy and Power, which spells Efficiency.

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It will pay you to give a Miller Carburetor a trial and we are sure that that trial means another satisfied customer.

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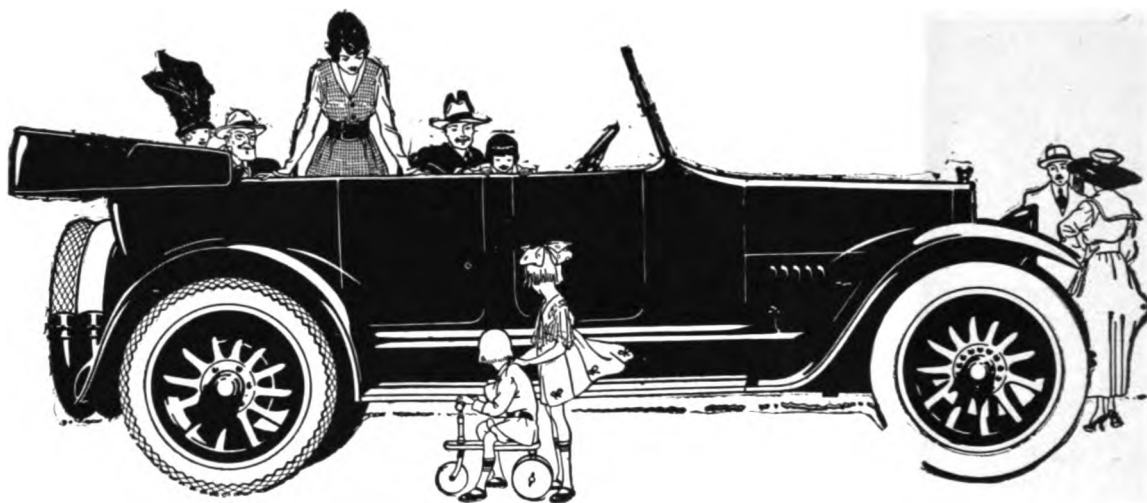
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Hundred Point Six



The Car of a Hundred Quality Features

IT is *Kissel-built*, not assembled, from the ground up, at the huge Kissel Factories—and critical car purchasers know what that means in *utility, style, light weight and completeness*.

No other car made has the famous Kissel-built axle. The double external brakes do away with the wear and tear of internal brake mechanism. You will be surprised at the generous use of the best bearings and bushings.

There is championship performance in the new, sturdy, Kissel-built power-plant. It is ready for any outdoor going. It *takes* the grades instead of *hitting* them. Its springs keep the load from hitting the road.

It is the car of a Hundred Quality Features. Compare them—early delivery if ordered now.

PACIFIC KISSEL KAR BRANCH

SAN FRANCISCO—VAN NESS AT GEARY

PORTLAND

LOS ANGELES

OAKLAND

FRESNO

SAN DIEGO

SEATTLE

MOTOR West

THE MOTORING AUTHORITY OF THE PACIFIC COAST

VOL. XXVIII., No. 7

January 15, 1918

\$2.00 PER YEAR

MORELAND SALES GAIN 47 PER CENT

**Big Pacific Coast Truck Plant Nearly
Doubles Output Last Year—Now
Makes 75% of Parts Used.**

The Moreland Motor Truck Co., of Los Angeles, Cal., manufacturer of Moreland distillate trucks, handled a volume of sales during the past year of 1917 that was 47.4 per cent greater than that for the previous year. During the past year the company devoted a great part of its energies to the erection of its new plant at Burbank, outside the city, but at the same time the main plant on North Main St. in Los Angeles has been enlarged by new additions. The company has developed the manufacture of Moreland trucks to an efficiency where more than 75 per cent of the parts making up its trucks are manufactured in Los Angeles. The territorial organization of the Moreland Motor Truck Co. was considerably expanded during 1917. The distribution of Moreland trucks reached third place in the motor vehicle registrations of the two states of Oregon and Washington a few months after the Pacific Northwestern agency had been taken by the McCracken Motor Co. The company is now operating factory branches in San Francisco, Oakland, Sacramento, Fresno, Stockton, Bakersfield and San Diego.

United States Tire Increases in South.

The United States Tire Co. branch organization in Los Angeles recently held its annual conference. During the meeting a resume of the branch's sixth year of business brought out that the 1917 business of the Southern California house in the sales of Chain, Nobby and Royal Cord tires, United States tubes and tire accessories, had surpassed that for the previous year by 150 per cent.

Moscovics Predicts Prosperity Here.

F. E. Moscovics, well known as vice-president of the Nordyke & Marmion Co., was a recent visitor in Los Angeles, Cal. In a speech before the Los Angeles motor car dealers' association, Moscovics said in part: "You can't isolate prosperity. The East is feeling the influence of the greatest flood of money ever turned loose in the history of the world, and in the very nature of things, California is bound to feel it soon. It will not feel it as soon as the munitions town in the East, but the citizen of that town is bound to come to California to spend it, or he is going to buy California oranges and vegetables at high prices if he stays in the East."

Represents Timken Axle on Coast.

George C. McMullen, plant manager of the metal products plant of the Timken-Detroit Axle Co., Detroit, has been compelled to leave the East owing to the poor health of his wife. He will locate in or near Los Angeles and will represent the Timken-Detroit Axle Co. and the Timken Roller Bearing Co. on the Pacific Coast. Previous to his above-mentioned connections, McMullen was associated with the Crane Motor Car Co., Bayonne, N. Y., for five years.

Renstrom Adds Lee Tire Line.

The distribution of Lee tires to meet the demand in San Francisco, Cal., has been taken over by the Frank O. Renstrom Co. of that city, well known as distributor of Grant cars and Bethlehem trucks. Lee tires are manufactured by the Lee Tire & Rubber Co., of Consohocken, Pa.

Sell Western Truck Attachment.

The Western Motor Sales Company, Seattle, Wash., will hereafter act as a selling agency for the entire output of the Western Truck Attachment Company. F. G. Batenburg is now head of the sales company. With increased facilities and sales force this firm will also handle Kleiber trucks.

SPOKANE DEALERS FORM TRADE ASSN.

**Practically Every Motor Car Dealer
in Inland Empire Capital Represented
in New Organization.**

Representatives of practically every automobile house in Spokane, Wash., attended the banquet inaugurating the Spokane Automobile Dealers' Association which was organized here last week. Those not able to be represented sent greetings or some expression of their approval of the new organization.

Harry Twitchell of the John Doran Company, Packard and Hudson distributors, was the unanimous choice for president. Around the banquet table 32 were gathered. The banquet was held at the Davenport Hotel, and among those present were E. B. Snyder, King representative; John Doran and Harry Twitchell, Packard and Hudson; H. M. Eastman, Cadillac and Hupmobile; E. C. Finley, Buick; D. D. Skinner, Elgin and Stearns; W. W. Winterson, Winton; R. L. Strickle, Oldsmobile; W. H. Barnes, Mack trucks; D. E. Ahrens, Stephens Six; O. E. Logan, Chalmers; R. L. Borgardus, Spokane Auto Market; Frank A. Vogt, Sterling and Gary trucks; Geo. W. Armstrong, Armstrong, Barclay Auto Company; D. F. Batcheller, Studebaker; H. C. Farnham, Stutz and Columbia; H. Berg and P. W. Lynch, Automobile Clearing House; Guy E. Riegel, Dodge; A. C. Balnave, Paige; A. M. Highhouse, Crow-Elkhart; C. P. Brewer, Saxon, Cole and Westcott; T. J. Riley and John Coulton, Chevrolet and Chandler; George Beverly, Moon and Scripps-Booth; Floyd I. Logan and P. C. Gartley, Maxwell; Thad. S. Lane, President Inland Auto Club; and Fred Alsbaugh, treasurer of the new automobile dealers' association.

FAULKNER GETS ALL CALIFORNIA

Southern Representative of the Marmon Adds Northern Half of State to His Territory.

From being the very successful distributor of Marmon cars in Southern California, Al G. Faulkner has had his territory greatly expanded and his importance to the Marmon factory vastly enhanced by being appointed distributor for the entire state of California. In the process of adding the northern half of the state to his old territory, Faulkner will take over the business of the H. B. Rector Co., of San Francisco, which until recently handled the Marmon car for the Northern California territory. L. E. Townsley has acted as sales manager in San Francisco for Rector and will continue in the same capacity for Faulkner. The new state-wide distributor for the Marmon is one of the pioneers in the automobile business on the Pacific Coast. In entering the agency field in San Francisco he treads upon familiar ground, for he once handled a fleet of steam cars in that city in the olden time when steam and gasoline competed on something like equal terms.

N. W. Owners Ship South by Rail.

Oregon and Washington car owners who are in the habit of spending their winter vacations in Southern California, are still compelled to ship their cars by rail, if they expect to use them when they finally reach the boulevards in the southern part of California. The all-year Pacific Highway, which is planned to span the Coast from Lower California, Mexico, to Vancouver, British Columbia, is still much of a beautiful dream as far as its existence north of Sacramento is concerned. Formerly many cars were shipped by water, but much of the Coastwise shipping has been commandeered by the Government, diverting the shipment of automobiles over to the railroads. Figures on freight rates collected by George Chambers, assistant secretary of the Oregon State Motor Association, show that in carload lots the rate is about 51 cents against \$1.02 where a single automobile is shipped by way freight.

Starr to Distribute Macbeth Lenses.

George E. Starr, president of the Starr Motor Supply Co., of San Francisco, has secured the local distribution of the Macbeth headlight lens for the surrounding Bay territory.

Miller Plans Big Eastern Campaign.

The Harry A. Miller Mfg. Co., of Los Angeles, which manufactures the celebrated Miller carburetor, and is one of the largest accessories making firms on the Pacific Coast, is preparing to push its product throughout the entire country to a greater extent even than last year. In the East especially their carburetor will be exploited, and at the Chicago show contracts will doubtless be concluded whereby at least three large Eastern factories will adopt Miller carburetors as standard equipment for their cars.

Following a very successful racing season, a series of tests was carried on at several of the Eastern factories up to the end of last year, and these tests were so conclusive that, according to Harry Miller, the question of adoption of the Miller carburetor by these companies is practically settled. One of the most recent contracts signed by the company is that with the Wolverine Motor Car Co., of Detroit.



HARRY A. MILLER
Inventor of the Miller Carburetor.

With the Miller Carburetor Distributing Corporation established in New York City, the marketing of the greatly enlarged output of the Los Angeles company is much simplified, and the outlook for a still greater demand during the present year is so favorable that plans have already been perfected looking to a doubling of the present capacity by the erection of a large addition to the Washington-street plant.

Some of the contracts under which the company is at present operating have five years to run, and at least one of them calls for the delivery of not fewer than 1500 carburetors a month for that period. These carburetors are not designed alone for use on passenger cars, but on motor trucks, motor boats and aeroplanes as well, the Miller having proved its remarkable economy and smooth working in actual service tests. Quite a large business has sprung up on the Coast dur-

ing the past year in equipping private yachts with the Miller carburetor.

The Miller brothers, who are at the head of the company, believe that the Pacific Coast in the coming years is destined to become one of the greatest accessories markets in the country, and believe that not a few big companies in the East will either remove to this section or will establish branch factories here.

Equipment Repairs Co. Moves.

After a period of six years, during which it has built up an excellent business, due to the perfection of its work, the Motor Car Equipment Repairs Co. has been compelled to move into greatly enlarged quarters at 1246-48 South Los Angeles Street, where, with improved machinery and a greatly enlarged force of experienced workmen, it is rapidly extending its business.

As its title implies, this company devotes its energies to the manufacture and repair of automobile equipment, with especial reference to radiator, fender, body, tank and hood work, and is rapidly forging to the front in its special line.

The new location of the company is well adapted to the work, the absence of a trolley line in front of the place making access to the plant easy for the car owner. Another feature of the new plant which Manager J. B. Hawkins is emphasizing is the promptness with which work can now be turned out, due to the increase of space, the improved machinery and the much larger force of workmen.

Handles Common-Sense Polish in L.A.

George L. DeFount, temporary address 1053 Normandie avenue, has just arrived in Los Angeles from San Francisco, where he secured from the inventor, Franklin J. Kelley, the distribution rights for Southern California of the Common Sense Luster Restorer, a polish which renews the original gloss and brilliancy of factory baked enamel, and is not affected by rain or sunshine. This polish contains no oil, wax, grease or acid, and the finish is lasting and the cost small.

Mohawk Tire Opens Coast Branch.

Mohawk tires to meet the Pacific Coast trade demand will be distributed from a new branch recently opened in San Francisco, Cal., by the Mohawk Rubber Co., of Akron, O. George Cowden, who has formerly covered the Western territory for the company, has been appointed manager of the branch, and Robert W. Moore, who comes to the Coast from the home office in Akron, will have charge of the clerical end. The new branch is located at 1436 Van Ness Ave.

Bate, of Mitchell, to Visit Coast.

John W. Bate, who recently completed his gradual relinquishment as head of the engineering of the Mitchell car by retiring from active connection with the Mitchell Motors Co., of Racine, Wis., will probably arrive in California soon to enjoy a long vacation. Though resigning the position of vice-president in charge of engineering, Bate retains a considerable stock interest in the Mitchell company. He entered the automobile industry when it was in the stage of an uncertain and precarious infancy and had a large share in the building of the Mitchell plant.

S. F. Truck Show Annex Looms Larger

The large motor truck show which is to be held in conjunction with the Pacific Automobile Show in San Francisco in February is steadily taking on increased importance as the number of applications for entry grows. It now seems certain that the commercial vehicle division of the show under a large tented space on a lot opposite the Civic Auditorium.

Seattle White Plans New Home.

The White Co. branch in Seattle, Wash., will have a new building erected for it that will call for an outlay of more than \$50,000. Ground has been leased at the corner of Eleventh Ave. and E. Pine street. The new home of White cars and trucks will have three stories and dimensions of 60x80 feet and will be completed in about ninety days.

Important Changes in Portland Firms.

Important changes in the personnel of three Portland, Ore., automobile firms became effective today, as the result of a transaction concluded between A. S. Robinson, northwest manager for the Pacific KisselKar Company; W. H. Wallingford, Ford dealer and E. A. Mitchell distributor of the Liberty and Premier cars. Together with A. B. Smith, road man for the KisselKar, Mr. Robinson has bought out Mr. Wallingford and will take over the Ford agency. Mr. Wallingford, in turn, has bought out the interests of Mr. Mitchell, as Liberty and Premier dealer and will be located at 526 Alder St.

Leach is Largest King Dealer.

Martin A. Leach, head of the Leach Motor Car Co., of Los Angeles, Cal., King, Liberty and Dort distributor, recently learned that he is the foremost King car dealer in the world, the third largest Dort car dealer and fourth largest Liberty car dealer, running tie with Detroit. This information was contained in three congratulatory telegrams coming from the factories of the King Motor Car Co., Detroit, the Dort Motor Car Co., Flint, Mich., and the Liberty Motor Car Co., Detroit.

General Tire Agent for Oregon.

George K. Cassidy has taken the representation for the General tire in the state of Oregon and will handle them through the American Tire Co. in Portland, Ore.

GREER-ROBBINS TO HAVE ALL OF CALIF.

Hupmobile Distributors to Have Nevada and Arizona as Well—New York Only City to Sell More Hups.

The Greer-Robbins Co., of Los Angeles, Cal., Hupmobile dealer in Southern California, will now broaden its territory and activities and will act as Hupmobile distributor for the entire state of California and the adjoining states of Arizona and Nevada. Also, as a result of balancing its books for the fiscal year closing June, 1917, the Hupp Motor Car Corp. informed the Southern California agency that it possessed the distinction of being the second largest Hupmobile distributor in the world. Greer-Robbins led the other large Hupmobile distributors in Philadelphia, Chicago, St. Louis and Boston in the sales and distribution of Hupmobile cars and yielded the palm only to the New York City agency.

P. H. Greer and A. C. Robbins, partners in the firm, will divide their time between Los Angeles and San Francisco. The San Francisco branch will remain under the management of E. W. Milburn, former manager of the Hupmobile factory branch in San Francisco. The Greer-Robbins Co. is one of the oldest automobile firms in the state, having been established in 1903.



BUILT UP A MILLION-DOLLAR BUSINESS IN REPUBLIC TRUCKS IN NINE MONTHS.

The Harrison Motor Car Co., distributors for Republic trucks in Northern California and Nevada, with headquarters in San Francisco, was organized by H. O. Harrison in February, 1917. Chaos, inefficiency, disorganization and instability, to a very great extent, had long been the order of things in the commercial vehicle business in San Francisco, and Mr. Harrison, with his considerable experience and good business sense, was quick to discern the possibilities of a motor truck business conducted along efficient and legitimate lines, and when the opportunity came to handle the Republic truck, he was not slow in taking it up. Now the Harrison Motor Car Co. is little more than nine months old, and has already reached its first million-dollar mark—a volume of business to be envied by the leading department stores of a good-sized city. As an example of its constant growth, here are some figures pertaining to the amount of business turned in during the nine months they have been in existence. February, the first month, their sales equalled \$17,500; March, \$82,000; April, \$114,500. Business remained at about this level until September, when sales jumped to \$123,000, and October saw a still further increase to \$124,000.

When the Harrison Motor Car Co. was organized, the working force consisted of fewer than a dozen employees. Today, there are more than forty members in its organization. In addition to the main place of business on Golden Gate Avenue in San Francisco, Mr. Harrison has established a branch sales and service depot in the Mission district of the city. Republic trucks are also sold in Oakland, Cal., by the Harrison organization. Thirty-five dealers throughout Northern California and Nevada work in conjunction with the Harrison Motor Car Co. in distributing Republic trucks in their territory.

"AUTO-CRUISER" IS STRANDED IN MUD

**Commodore Magner, in Denby Truck,
is Marooned by Floods for Two
Weeks on the Pacific Highway.**

Commodore Robert E. Magner, the Seattle yachtsman and former automobile man who fitted out a Denby truck in Boston with all the conveniences of a five-room flat except a dumb-waiter, christened his car the good old deep-sea name of "Auto-cruiser," and then motored across continent to Los Angeles, San Francisco, and Portland, was marooned for nearly two weeks on the Pacific Highway between Portland at Seattle.

The Commodore thought he had put behind him the worst road in the United States when he weathered the Winter mud of Pass Creek Canyon in Southern Oregon. He has slightly revised his opinions.

He started from Portland for Seattle, on the last lap of his long overland cruise, just as the Northwest was being deluged by floods, late in December, after a period of very heavy rains. A short distance beyond Kelso, Wash., he found himself surrounded by flood waters. The Auto-cruiser occupied the center of an island, so to speak, with water on all sides.

There was nothing for the Commodore and his party to do but to wait until the floods should subside and the roads dry up sufficiently to permit further travel. It was nearly two weeks later before he was able to resume his journey.

In justice to the Pacific Highway, it should be said that flood conditions this winter have been almost unprecedented. Within two weeks the Pacific Highway between Portland and Tacoma and Seattle was twice blocked to all automobile travel by successive rises of the Cowlitz river between Kelso and Castle Rock, Wash.

Several weeks ago a slide blocked the main Pacific Highway between these points so that automobiles had to take a detour road for 11 miles. It was this road that was overflowed by the Cowlitz, with the consequent blocking of travel. The detour road was only a dirt affair, thus adding greatly to the difficulty of motorists after the floods went down.

Ordinarily the Pacific Highway between Portland and Seattle is an all-winter road. By this time next year it will be possible for motorists to

travel from Southern California through to Portland, Seattle and Vancouver, B. C., at almost any time in the winter, barring possibly a few weeks when the highway over the Siskiyou is blocked by snow. Pass Creek Canyon, Cow Creek Canyon, Wolf Creek Hill and other notorious danger points on the highway in Southern Oregon by that time will be in fine condition for winter travel, as the State Highway Commission of Oregon either has construction work already in progress, or the contracts let for the improvement of all these points.

Doane Truck in New Factory.

The Doane Motor Truck Co. of San Francisco, Cal., recently occupied its new factory building at 428 Third St.

Century Tires in Southern California.

J. B. Wood, formerly manager of the Los Angeles territory for the Pacific Hardware & Steel Co., who resigned his position to enter business on his own account, has secured the exclusive distribution of the Century-Plainfield tires in Southern California, Arizona and New Mexico. A service store will be opened at once in Los Angeles, from which free service will be extended to all Century-Plainfield owners. The firm name will be the J. B. Wood Tire Co., and temporary offices have been opened at 923 East Third street. Mr. Wood is well known in Southern California for his selling ability, and this, in connection with the high quality of the Century-Plainfield line, should speedily establish for him a substantial business.

Oakland Shipments to the Coast.

Fifty new Northern Pacific freight cars have been obtained by the Oakland Motor Car Co. for shipments to the Pacific Coast. They are now being loaded for Seattle and Portland. With five Oakland cars to each freight car, this means that within a week or two the Pacific Northwest will have 250 new Oaklands for immediate delivery.

Pomeroy With the Colors.

C. J. Pomeroy, who was formerly at the head of the operating department of the Seattle branch of the B. F. Goodrich Co., has been commissioned captain in the United States Army, and has been ordered to Camp Lewis.

Maginnis Heads Leavitt L. A. Sales.

E. A. Maginnis, formerly of Los Angeles and more recently connected with the automobile industry in San Francisco, has returned to the southern city as sales manager for the J. W. Leavitt Co., Los Angeles Chevrolet and Oldsmobile distributor.

Coast Agents Visit Denby Plant.

So insistent has become the demand for Denby trucks in the Pacific Northwest that several Coast representatives of that famous truck have traveled all the way to the Detroit factory in order to hasten the delivery of vehicles. W. C. Garbe, president of the Oregon Motor Car Co., Park and Davis streets, Portland, was one of the visitors. This firm not only handles the Denby in Portland, but has a large distributing branch at Spokane, operating under the name of the W. C. Garbe Motors Co., and in addition has various branches throughout Oregon and Washington.

Another Northwest Coast visitor was P. E. Sands, manager of the automobile department of Frank Waterhouse & Co., Pine and Bellevue streets, Seattle, Wash., who control Denby sales in practically half of Washington State. Still other seekers after more trucks than their original quota were W. E. Walther and Ed. M. Williams, of the Walther-Williams Hardware Co., The Dalles, Ore., who control several counties in Oregon, with headquarters in The Dalles.

Fresno Overland in New Home.

Serving as factory branch for the entire San Joaquin Valley region, the new Fresno, Cal., building of the Willys-Overland Co. of California has been occupied by the local organization, of which Frank Hood is manager. More than \$60,000 has been invested in the new building, which is three stories high and has a total of 45,000 square feet of floor space. The Fresno branch for the Willys-Overland has jurisdiction over territory extending from Stanislaus County on the north to the Tehachapi range on the south.

McPhail Takes Stutz for Oregon.

The Stutz line, embracing the two well-known Bulldog and Bearcat models, will be represented in the Oregon territory by C. D. McPhail, manager of the Autorest Garage in Portland, Ore.

Retires From Tacoma Mitchell Agcy.

N. L. Goodwin, partner in the McDonald-Goodwin Co., of Tacoma, where it handles the Mitchell car, has disposed of his interest in the firm to King E. McDonald.

Seven-Seven Changed to Riegel Bros.

Guy E. Riegel and D. R. Riegel now head the Dodge agency in Spokane, Wash., for the Inland Empire territory, held recently by the Seven-Seven Co. At the same time the name of the company has been changed to Riegel Brothers.

L. A. Concern Meets Glare Situation.

The Torrance Glass Co., of Torrance, Cal., a suburb of Los Angeles, has established headquarters in the latter city for the sale of its Glareless Lens, a device which, it is claimed, meets every requirement of the legal demands of that portion of the new State automobile law relating to lighting. The center of the lens is concave, the result being that the refraction is thrown downward. The upper and lower portions of the lens are corrugated, which has a tendency to spread the light point, and absolutely prevents the focal ray from rising above the height of 42 inches at a point 75 feet in front of the car. A portion of the periphery of the lens is ground to a depth of about 1½ inches toward the center. The lens throughout is so constructed on scientific lines that it will give a strong, focused light through its peculiar corrugated diffusion, without glare or blinding flash. At the same time it will throw a light which will make visible any small object for a distance of 400 feet in front of the car, and at such an angle that objects in the fields to the right and left are almost equally visible to the driver.

William White, sales manager of the Glareless Lens department of the Torrance Glass Co., is in charge of the Los Angeles headquarters, which are located at 805-7 South Los Angeles street.

Master Carburetor to Employ 70 Men.

The Master Carburetor Co., of Los Angeles, Cal., expects to have its greatly enlarged plant in full operation within ninety days, employing about 70 men.

Fageol Truck in Southern California.

The Fageol truck will be distributed in the Southern California territory by Jack Ruddle and Frank and Ciro Menillo. The Fageol truck is well known as a California-built product, being produced by the Fageol Motors Co., of Oakland, Cal., capitalized at \$3,000,000. Jack Ruddle recently acted as sales manager for the Mercer-Pacific Coast agency. The new agents have opened quarters on North Los Angeles street.

Cowan Attends Eastern Shows.

Norman Cowan, who represents several Eastern factories on the Pacific Coast, is attending the National Shows, incidentally visiting each of the factories whose goods he is representing. Among these are L. P. Halladay Co., Streator, Ill.; "X" Laboratories, Boston, Mass.; Pennsylvania Piston Ring Co., Cleveland, O.; Swan & Finch Co., New York City;

Sparks Withington Co., Jackson, Mich.; Prismolite Co., makers of the Sun-Ray Lens, Columbus, O., and several others. Mr. Cowan will return to the Coast in time for the opening of the San Francisco show on February 16th.

Howard Co. Men Work for U. S.

The Howard Automobile Co., Buick Pacific Coast distributors, have, to date, given twenty-four men to the land and naval forces of Uncle Sam. The two latest to leave are Frank X. Murray and Perry M. Graves, who have gone to Detroit at request of Major E. G. Hall, formerly of the Hall-Scott Motor Co. Perry M. Graves, for some time representing the Splittorf people in California, will unquestionably be a valuable man for the Government. Frank X. Murray has had much experience with Buick valve-in-head motors and will be especially valuable on the Liberty motor, which is of the valve-in-head type. Murray and Graves both expect to be detailed as motor inspectors on the Liberty motors.

Spokane Eldridge Has Large Increase

Business was a quarter of a million dollars better during 1917 than during the year previous for the Spokane, Wash., branch of the Eldridge-Buick Co. The gross business amounted to \$1,250,000. Buicks were sold to the number of 622, and G. M. C. truck sales totaled 124. In addition to its strictly motor vehicle business the Spokane branch added to the agricultural efficiency of the Inland Empire territory by selling a goodly number of tractors.

Cummings Takes Buick in Ontario.

George S. Cummings has taken over the Buick car agency for Ontario, Cal., and the adjacent territory, under the name of the Buick Garage. He was formerly a well known mining man in Arizona and New Mexico.

Perfection Tire in Northwest.

The Perfection tire will be distributed in Oregon and Washington by the Tri-State Tire Co., of Portland, Ore., which has located at 72 Sixth street. W. L. Bartlett is manager of the company, and H. S. Chapman, president. Perfection tires will be sold both wholesale and retail by this company.

Auburn Distributor for No. Cal.

B. M. Peacock, distributor of Hudson and Hupmobile cars in the Fresno, Cal., vicinity, has been appointed Northern California distributor for the Auburn car. Headquarters in San Francisco will probably be opened some time early in 1918.

EVERY DEALER IN PORTLAND'S SHOW

Only Motor Car Exhibition to Be Held in Pacific Northwest Will Open Its Doors on February 7th.

Portland's automobile row is deep in plans for the coming automobile, truck and tractor show, which will be held in the new Portland City Auditorium from February 7 to 13, inclusive.

Portland dealers will bat almost 1,000 per cent in representation. In fact, though the auditorium is a much larger building than the Armory, where last year's show was held, all the available space for passenger car exhibits has been contracted for.

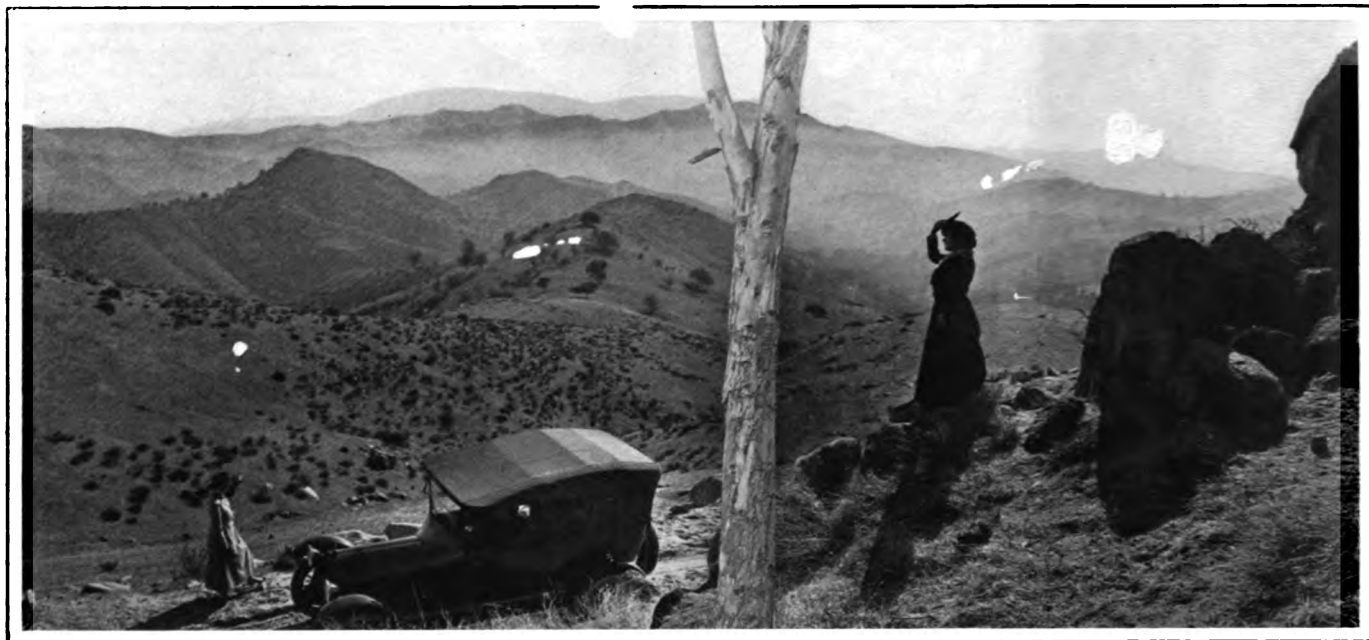
M. O. Wilkins, secretary of the Dealers' Motor Car Association of Oregon, will be manager of the show. The committee in charge is composed of A. B. Manley, president of the Manley Auto Co.; C. M. Menzies, manager of the Northwest Auto Co.; A. W. Regner, of Regner & Fields; H. H. Eling, manager of the Portland Overland-Pacific Branch, and Mr. Wilkins.

Like most of the shows this year the Portland exhibition is to have a distinctly war flavor, in that utility is to be featured more than fancy jobs, though several of the latter will be on display, too. Trucks and tractors are to have more prominence in the show than ever before, and the committee in charge is endeavoring to interest the farmers in this feature. The railroads have granted reduced rates to Portland during the week.

The Portland show will be the only automobile show to be held in the Northwest this year, as dealers in Seattle, Tacoma and Spokane have decided not to hold shows. It will come just ahead of the San Francisco affair, February 16-26, and a large representation of Eastern men prominent in motor car and allied industries is expected to be on hand during show week.

Auster Tonneau Windshield in Cal.

Eugene M. Tilden, 6413 Hollywood Blvd., Los Angeles, who represents the Auster Extending Tonneau Windshield in California, reports a rapidly increasing demand for this meritorious device, which provides protection for the occupants of the rear seats of an open touring car. This shield is an English invention, and is being built by the Fryer-Auster Co., Providence, R. I., under exclusive license from the original patentees, Messrs. Auster, Ltd., of England.



BEAUTIFUL VIEWS ABOUND ALL ALONG THE CALIENTE-KERNVILLE ROUTE TO THE KERN RIVER CANYON.

Wonderful Work Done on Kern County Highways

In Three Years the Many Scenic Roads Have Been Made Safe for the Wheeled Democracy of Motordom — County Spends More in Proportion to Population Than Does Los Angeles and Several Other of Her More Wealthy Neighbors

WATER AND OIL are notoriously poor mixers, and perhaps a better illustration of this well-known fact would be hard to find than that furnished by Kern County. The water of Kern County's rivers flows to the north through the heart of the San Joaquin Valley and empty into San Francisco Bay. Kern County oil, on the other hand, exhibits its utter unso-ciability by flowing to the south for the most part, climbing a couple of mountain ranges, even, to avoid associating with the aforesaid water. Blood is thicker than water, they say, and so oil must be, for the county of Kern, though it lies for the most part to the north of

the ranges of Tehachapi and Tejon, which Nature evidently intended as natural barriers between Northern and Southern California, is ranked as a Southern California county, and most of her business affiliations follow the course of the oil and the gas from her wonderful oil fields, and the path of the electric current generated in the powerhouses of the Kern River. "The north line of Kern county" is the designation in many an automobile dealer's contract which defines his Southern California territory, so from the motorist's standpoint at least it is safe to call Kern a county of Southern California.

Somewhere in the fastnesses of the Kern River Canyon is an unmarked grave in which sleeps the man who gave his name to the river and the county. Though his resting place is not marked by marble or granite, he can sleep well content that his name is commemorated in one of California's most beautiful rivers, and one of her most flourishing counties. For it was after Lieut. Kern, an officer in one of Fremont's exploring expeditions, that Kern River was named, and the county later took its name from the river. Lieut. Kern died of mountain fever, while the famous "Pathfinder" was seeking out the best routes and passes across the Sierra Nevadas in preparation for the horde of immigrants that he knew would sooner or later seek the Golden State. He was buried somewhere on the upper reaches of the river, and Fremont named the stream for his dead comrade.

To Fremont belongs the credit for mapping and reporting on the Tejon and the Tehachapi Passes. He investigated both routes and reported on them to the government, but he was baffled in his efforts to discover a direct route to the eastward through the Sierras.



FINE ROADS BRING FISHING GROUNDS WITHIN EASY REACH.

Of Kern County roads from the time of Fremont's journeyings until the year 1913, perhaps the less said the better. In the rich silt soil of extreme upper end of the San Joaquin Valley Nature did not furnish Kern County with good natural building material. And when generous rains had fallen, the condition of the adobe roads, for example, near Rose station and Adobe station were simply atrocious. Worse roads than these in time of rain could not be imagined. The grade down the north slope of the Tejon was steep, and once in the valley the traveler had to follow a crooked road of angling section lines to get to Bakersfield. The old White Wolf grade on the north slope of Tehachapi was deceptively steep and was the scene of more than one serious motor accident. And the alleged roads that connected Bakersfield with the immensely rich oil fields of the West Side were a very successful barrier toward any sort of comfortable or expeditious travel.

All this is past history, however, and all of the main arteries of Kern County travel have been made safe for the wheeled democracy of motordom. In the summer of 1913 the people of Kern County had become so thoroughly converted to the good roads idea that they passed a bond issue of no less than \$2,500,000 for the improvement of 300 miles of road. In view of the population of the two counties this was a much more creditable showing than had been Los Angeles County's \$3,500,000 bond issue some years previous. As soon as the bonds had been sold the big task of road improvement commenced, and on the 8th day of last December the final work under the bond issue was completed.

In addition to the good roads of her own building, Kern

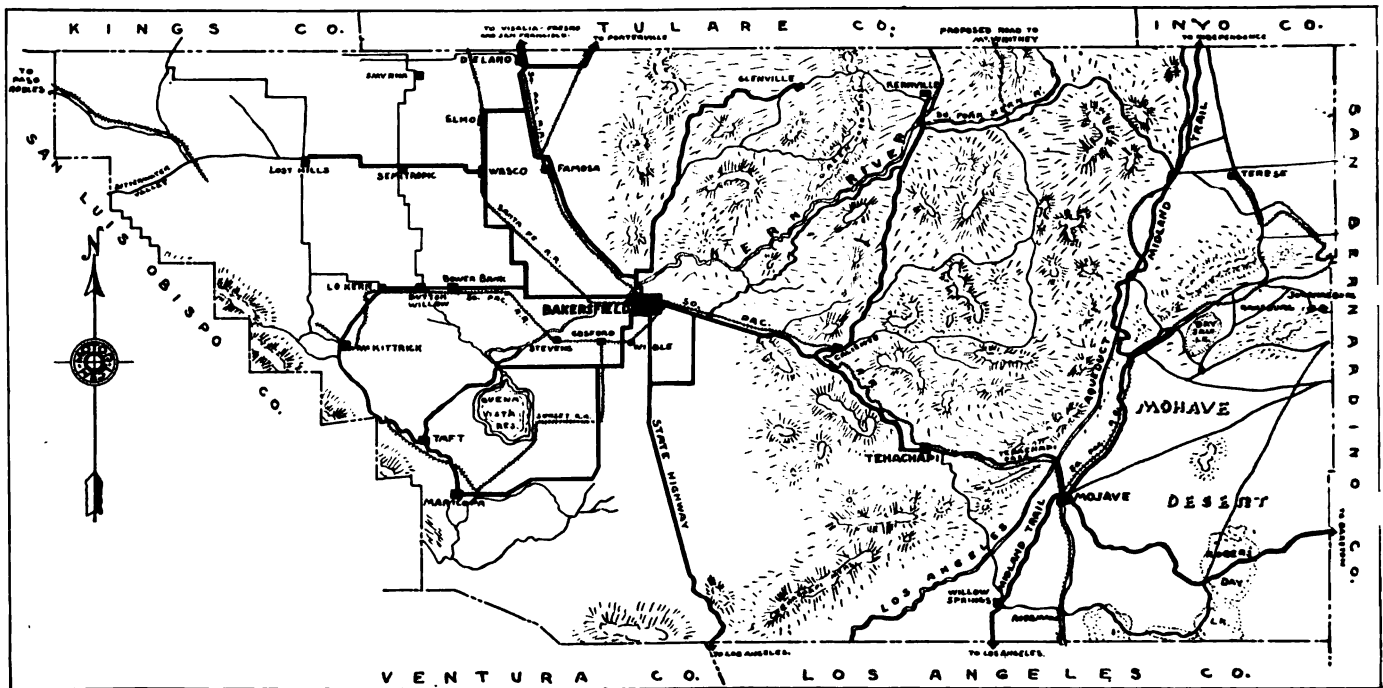


AMONG FOOTHILLS ON WAY TO KERN RIVER CANYON.

county during the same period benefited from the State good roads system to the extent of 80 miles of state highway on the Valley Route. With scarcely so much as a curve this long stretch of splendid concrete road runs north and south through the very heart of Kern County. No longer does the traveler find steep grades to descend on the north slope of the Tejon. Over sweeping curves that nowhere exceed 6 per cent the motorist drops from Lebec near the Kern County line to the level floor of the San Joaquin Valley. Gone, too, are the angling turns of the old "section line" road. For twenty miles over the vast plain the road runs as straight as the proverbial ar-



LOOKING SOUTH FROM SUMMIT OF MOUNT WHITNEY, TOWARDS WHICH KERN COUNTY IS BUILDING MOTOR ROAD.



MAP SHOWING THE KERN COUNTY ROAD SYSTEM, ALL HIGHWAYS RADIATING FROM BAKERSFIELD, OIL COUNTRY CAPITAL.

row, then a gentle curve and straightaway again all the way to Bakersfield. The engineers who laid out that particular stretch of road had evidently digested very thoroughly the geometric axiom that a straight line is the shortest distance between two points, and followed the principle as closely as possible.

In a certain sense, however, the very fact that the state highway takes the traveler through Kern County so quickly and easily, works rather a hardship upon the county. Traveling the state highway through Kern is too much like traveling on the Twentieth Century Limited. There is no incentive or opportunity to leave the perfect road, and too many motor tourists have therefore remained unacquainted with the good roads system that Kern County has built and the many scenic attractions tributary to it.

Because the Ridge and Tejon was the most "direct and practical" route, the state highway followed it, and the Tehachapi Pass, over which cross the Santa Fe and Southern Pacific railroads was in consequence far removed from the tide of motor travel. Kern County included in her bond issue a provision calling for the improvement of this road. It provides direct communication with the Midland trail at Mohave, and the growing communities of fruit ranchers in the Tehachapi were entitled to a good road to Bakersfield at any rate. So out of Bakersfield a concrete highway parallels the railroad as far as Caliente. The old White Wolf grade will never claim another victim, for an entirely new road, on the "6 per cent" plan replaced its dangerous grades. Tehachapi Pass road, as far as the Kern county portion of it goes, is nothing for the motorist to fear any longer.

Out of Caliente a road branches to the northeast that is worthy of more than passing attention, for one day it will be the commencement of a wonderful road, a motor highway that when complete will reach the summit of Mt. Whitney, highest peak in the United States. Though not paved, it has been improved under Kern County's bond issue through Walker Basin, Havilah, Bodfish and Isabella

to Kernville. At Isabella the Mt. Whitney road will turn to the east to Weldon, and thence up the canyon of the Kern to where the river finds birth among the cold blue Sierra lakes and the awful granite pinnacles of the Sierra peaks. This is a veritable paradise for the trout fisherman, and, because the country is less frequented by the summer visitor than the Tahoe or Yosemite regions, Kern River at present proves all the more attractive to the less gregarious of the vacation-seekers. When the Mt. Whitney road is completed, however, it is safe to predict that it will yearly receive a wonderful tide of motor travel. The view from the 15,000-foot summit of Whitney is tremendous, and it is a daring conception to build a motor road that will permit the ascent practically to the very summit by automobile. Kern County officials are strongly in favor of the idea, however, and intend to build their share of the road year by year as fast as their funds permit.

Another Kern County road that deserves much more travel than it receives at the present time, is the road from Bakersfield out through the Kern River oil fields, and thence up into the pines and the little mountain towns of Woody and Glennville, and the resort, Jack's Ranch. It is a road entirely too little known by Southern California motorists, and since its improvement by Kern County it is a delight to travel.

For scenery, one must travel eastward from Bakersfield in Kern County. Westward, spread out fanwise, extend a system of concrete roads that can claim no merit from a scenic standpoint but which have immense importance as commercial highways. They link Bakersfield with the vastly rich oil fields of Taft, Maricopa, McKittrick and Lost Hills, and over them has grown up a motor stage traffic that has practically superseded the railroad, and a motor truck freight-carrying traffic that by reason of its swiftness and flexibility has been of immense aid to the oil operators.

From Maricopa to Bakersfield the stages carry back and forth a daily average of something like 300 passengers. The railroad today carries an average of three passengers

daily. A swifter service by far and less expensive fare won a complete victory for the motor stages, which carry a large proportion of the travel from the oil fields to Los Angeles as well. Because it is something like 70 miles shorter to come by motor stage from Taft to Los Angeles than to take the railroad the motor stages have an overwhelming advantage in this particular field.

While from a strictly scenic standpoint, the oil fields do not offer attractions, yet it is nevertheless an extremely interesting trip from Bakersfield to Taft or Maricopa. The Kern County oil fields have proved among the most productive ever discovered, and they have gone a long way towards contributing to the material wealth of the state. From them extend the oil pipe lines over the Tejon mountains to Los Angeles, and the natural gas from the fields is also piped to Los Angeles. Incidentally the gas line produces in winter at Lebec a very considerable quantity of high-grade gasoline, because, unintentionally, the process of extracting "casinghead" gasoline is reproduced in the conditions in the pipe line. The gas passes through the pipe line under heavy pressure. As it passes over the summit of the Tejon during the winter while snow lies on the ground, the process of compression and refrigeration which the casing head gasoline plants use, is thus automatically reproduced and the "traps" in the pipe-line gather large quantities of high-grade gasoline. If you ever pass through Lebec in cold weather, buy some of it.

National publicity for Kern County roads will soon be spread through the medium of the indefatigable Goodrich Touring Bureau. When the work of building the county roads was nearing completion, Goodrich sent their famous road scout, Hugdens, to log and map the entire system. The result of his work will be available in the shape of reliable logs and maps that can be obtained at any Goodrich touring bureau within the next month or so. Hugdens and his Studebaker have traveled something like 250,000 miles over the Pacific Coast and the Middle West in this work for the Goodrich Company, but he unhesitatingly pronounces the Kern River roads to be the most beautiful he has ever seen in all of his travels.

Name of Oregon Trail Perpetuated

The Oregon Trail is to be perpetuated in the highway annals of the state of Oregon. In designating the state highways the highway commission of Oregon has given the name "Oregon Trail" to the road leading from Ontario through Baker, LaGrande and Pendleton to Umatilla, where connection is made with the Columbia River Highway.

Cars Visiting Nat'l Parks Increase Nearly 100 Per Cent

During the past season the number of private motor cars visiting the eleven principal National Parks was 55,296, representing an increase of close to 100 per cent over the figures of 29,828 for 1916. Owing to its nearness to and easy accessibility from the large Eastern centers of population, Rocky Mountain Park in Colorado far surpassed all other parks in the volume of visiting cars. Rocky Mountain Park received 23,004 cars, an increase of almost 130 per cent over the previous season. Next in order came Yosemite, California's summer playground, with 6,521 visiting cars this season, compared with 4,043 during 1916. Yellowstone National Park, in Wyoming,

GLITTERING CARS.

By WALT MASON.

Some poet wrote, in days of old, "All things that glitter are not gold." The poet's head was large and long, his intellect was working strong. There were no flies upon that bard, who sprung the truth, and sprung it hard.

All things that glitter are not gold; we wouldn't be so often told, if haply we'd remember that, and post the maxim in our hat. The junk that fakers want to sell will often look surpassing well, but when it's used it comes to pass that shining gold is only brass.

I bought two diamonds long ago; they cost me eighty bones a throw. I held them proudly in my hand, and there they shone to beat the band. I bought them from a stranger slick who found in me a trusting hick. I swallowed all his helpful bunk, and handed him my bottom plunk. And in a month the stones were dead; no gorgeous radiance they shed. The man who bilked me was a peach; those gems were worth just eight cents each.

The poet said, "Oh boys, behold! All things that glitter are not gold!"

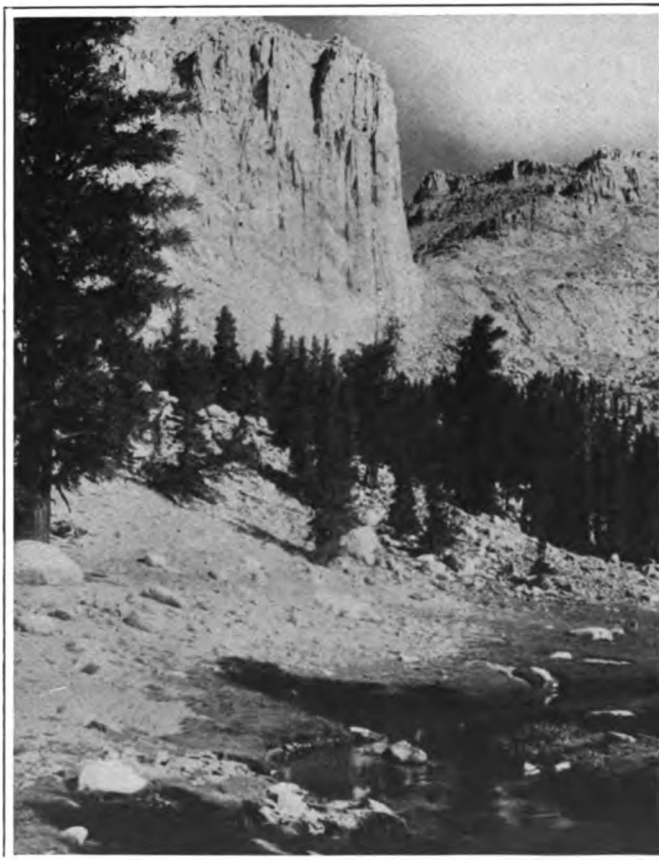
The man who goes to buy a car, down where the blithesome agents are, should keep the maxim in his mind; it isn't safe to go it blind. Some shining paint and nickel plate will make a tinhorn boat look great. The buyer, take it as a rule, is quite an easy man to fool. He knows no more about a boat than Uncle Ezra's billy goat. He doesn't know or want to know what makes the doggone inside go; but he would like a foolproof car in which a man may journey far without it coming all apart and rupturing the owner's heart.

He ought to buy a car that's made by men of standing in the trade. Have they been in the business long, and are their fame and credit strong?

He should remember that the Haynes was first to hit our native plains, and all the time it's kept abreast of everything that's first and best. That is the safest guarantee for easy marks like you and me.

The poet said, "Our feet grow cold, for all that glitters is not gold."

had 5,703 cars during the past year and 3,445 the year previous. Mount Rainier National Park was visited by 5,894 cars the past season and by 3,070 the year previous. Among the smaller parks, Crater Lake, in Oregon, increased from 2,649 to 2,756; Sequoia, in California, from 736 to 2,334; General Grant, in California, from 1,778 to 2,158; and Glacier, in Montana, from 902 to 1,121.



TYPICAL SCENE ALONG THE HEAD-WATERS OF THE BEAUTIFUL KERN RIVER.

Motor Trucks Are "Doing Bit"

Furnish Transport for Army, Help Build Cantonments, Assist Railroads and Are Now Carrying Mails

IN THE present period of national stress the importance of the motor trucks is forcing itself on official Washington, on the railroad executives, the express companies and on merchants and manufacturers throughout the country as never before. According to Windsor T. White, chairman of the Commercial Vehicle Committee of the National Automobile Chamber of Commerce, our War Department requires for an army of 1,000,000 men in Europe 50,000 motor vehicles, of which 38,000 are transport trucks, 2,500 are ambulances, 3,000 officers' cars and 6,500 motorcycles. American factories already are at work on orders for 30,000 trucks and it is anticipated that many more thousands will be ordered in the coming fiscal year. Forces in the field are dependent on motor trucks for all supplies, food, clothing, ammunition and medical supplies, and the injured in battle are removed to hospitals back of the line in motor ambulances.

The power vehicle is as essential to modern military operations as artillery. Every belligerent in the war is using motor trucks to the greatest possible extent. More than 300,000 are in use on all the battle fronts. Export statistics of the Department of Commerce show that 45,000 American motor trucks were shipped to the three principal Entente allied belligerents—England, France and Russia—during the first three years of the war, the great majority on order by the respective governments. In the fiscal year immediately preceding the war our exports of trucks to these three countries totaled 207.

Construction of our sixteen national army cantonments, housing 30,000 to 40,000 men each, in the amazingly short period of three months, was made possible partly by the use of motor trucks for hauling material, building roads, etc.

Aside from the immediate war needs for motor truck service, the country, confronted with transportation requirements exceeding the combined facilities of the American railroads, with their 270,000 miles of trackage and annual freight-carrying capacity of 396,000,000,000 ton-miles, has turned for relief to the 400,000 motor trucks owned and operated by private business and manufacturing concerns. If the short-haul work is taken off the shoulders of the railways by motor trucks, as proposed, it will greatly reduce the congestion of miscellaneous small shipments in the yards and freight houses of the terminals. This will clear the way for the more important through shipments of foodstuffs, materials for manufacturing, coal, munitions and army supplies. It will also release thousands of freight and express cars and hundreds of locomotives and train crews for the long distance hauling that can be handled only by the railroads.

The War Industries Board and the Railroads' War Board are now alive to the situation and are inviting the aid of the motor truck interests to take over all the short-haul work possible. Last fall the British Government decided to impress motor wagons into more extensive use, called for a census of all trucks registered in England

and initiated a movement to co-ordinate the operation of such road vehicles with the railroads. It has been proposed in Washington that the railroads be recommended to place an embargo on shipments of less than carload freight and express from points within 10 to 30 miles of the larger cities, forcing such shipments to be handled by motor truck. While this would be a radical move, it would only be the extension on a universal scale of work that is being done by motor trucks here and there all over the country. Many of the larger cities already have a number of motor express companies that operate fleets of trucks over regular routes to points from 10 to 40 miles outside of the cities. Department stores regularly deliver by motor wagon throughout a territory having a radius of 25 miles or more, and innumerable manufacturers and merchants in various lines make shipments by motor truck for distances up to 50 and even 100 miles. It is a regular feature of the business of the moving van companies to move household furniture by motor van any distance desired.

There are at least two trucking companies that operate trucks between New York and Philadelphia. One has a fleet of twenty-two five-ton trucks that operate on a daily schedule between the two cities—a distance of 90 miles. In addition, contracts are taken for special trips to Baltimore and Washington, Harrisburg, Pittsburgh and to New England cities.

Recently a company was organized in Detroit to operate a fleet of motor trucks with trailers at three-hour intervals daily over the 40-mile route from Detroit to Toledo. Practically all shipments from the rubber factories in Akron, Ohio, to Cleveland are made by motor truck, and one of the rubber tire companies has operated a motor express service with four trucks between Akron and Boston, Mass. The schedule calls for a round trip of 1500 miles in seven days. The trucks carry finished tires from the factory to the company's eastern branches and bring back cotton fabric and machinery. This longest regular trucking service has been in operation since last April and will be continued throughout the winter, weather and road conditions permitting.

Few people realize as yet the great possibilities of motor trucking. Several government departments have displayed more enterprise in this direction than American railroad and business men generally. The Quartermaster's Department in Washington has arranged for delivery of all new trucks for the army by highway from the factories to Atlantic ports for shipment abroad. Thirty thousand of these will be driven over the roads in trains of thirty trucks each, forming regular army truck companies. The trucks will carry full loads of spare parts and supplies. The decision to move the trucks and their cargoes in this way instead of by rail will effect a saving in the use of 17,250 freight cars and 345 locomotives and train crews.

The Post Office Department recognizes the possibilities of the motor truck. It has put in operation a motor truck parcels post service between Philadelphia and Baltimore and has called for bids for a similar service between Philadelphia and New York, New York and Hartford, Conn., and Detroit and Toledo. The Postmaster-General has recommended the organization of motor truck parcels post service out of all large cities to a distance of 50 miles, with the object of bringing the producer of farm

MAGNITUDE OF THE AUTOMOBILE INDUSTRY SHOWN BY FIGURES

FIGURES showing the magnitude of the automobile industry, including the capital involved, the cars in use and the labor employed, have been compiled from various sources by Alfred Reeves, general manager of the National Automobile Chamber of Commerce. The figures prove better than can be done in any other way the appreciation by the public and business men of the transportation facilities supplied by passenger cars and trucks, which are doing such great work in this country today in relieving the railroads of short-haul freight and passenger traffic.

The best evidence of the urgent need of passenger cars for transportation is the fact that the greatest registration of automobiles during the past year was in the agricultural states of the West and South. Another important fact is that ten million acres of tillable land are released for food production by the replacement of horses with the modern motor trucks now in use.

MOTOR CAR MANUFACTURERS.

Motor vehicle manufacturers in United States.....	550
Commercial vehicle manufacturers	372
Passenger vehicle manufacturers	238
States in which factories are located.....	32
Capital invested	\$736,000,000
Workers employed	280,000
Wages and salaries paid during fiscal year ended June 30, 1917	\$275,000,000
Motor vehicles produced in last fiscal year	1,808,194
Passenger cars produced	1,693,994
Commercial cars produced	112,200
Wholesale value of vehicles produced during last fiscal year	\$917,470,938
Paid for parts and materials by automobile manufacturers during last fiscal year	\$480,000,000
Production passenger cars in calendar year 1917	1,795,840
Production commercial cars in calendar year 1917	181,348
Average price of passenger cars produced in 1917	\$720

BODY, PARTS AND ACCESSORY MAKERS.

Number of concerns manufacturing some article used in automobile trade	6,789
Body, parts and accessory makers in United States	1,080
Capital invested by body, parts and accessory makers	\$336,000,000
Workers employed by body, parts and accessory makers, 320,000 workers, wages paid yearly at \$900 per man	\$288,000,000
Automobile tires manufactured during fiscal year ended June 30, 1917	18,000,000
Value of tires manufactured in last fiscal year	\$450,000,000

DEALERS, GARAGES, ETC.

Total dealers, garages, repair shops, etc., in U. S. ..	46,000
Automobile and truck dealers in United States	27,000
Garages	25,500
Automobile repair shops	13,500
Tire vulcanizers	12,000
Automobile supply houses	2,550
Jobbers of automobile supplies	282
Capital invested by dealers, garages, etc., estimated at \$4,000 each	\$184,000,000
Workers employed, estimated average of 5 each	230,000
Wages paid, estimated at \$800 per man	\$184,000,000

AUTOMOBILE EXPORTS.

Value of automobiles, trucks, engines, tires and parts exported 12 months ended June 30, 1917	\$133,411,217
Number of passenger automobiles exported last fiscal year	64,834
Value of passenger cars exported	\$48,620,928
Number of commercial cars exported last fiscal year	15,977
Value of commercial cars exported	\$42,337,315
Value of automobile engines, tires and parts exported last fiscal year	\$42,452,974

MOTOR VEHICLES IN USE.

Motor vehicles registered in United States	4,842,139
Motor trucks in use in United States	435,000
Tons of goods hauled yearly by trucks (estimated) ..	1,200,000,000
Cost of haulage by motor trucks at 18c per ton mile	\$1,080,000,000
Cost of haulage on basis of 24c per ton mile by horse and wagon	\$1,440,000,000
Value of passenger service at railroad rate of 2 cents per mile	\$1,152,600,000
Number of persons in United States to 1 motor car ..	24
Percentage of cars sold to farmers in 1917 (est.) ..	40
Number of automobiles in United States to each mile of public road	1.72
Number of automobiles in United States to each mile of surfaced road	14.77
Number of automobiles in United States for each square mile	1.4
Automobiles in use in all countries outside of the United States January 1, 1917	719,246
Automobiles in use in Europe January 1, 1917	437,558
Automobiles in use in Canada January 1, 1917	118,086
Automobiles in use in South America Jan. 1, 1917 ..	39,188
Automobiles in use in Australasia and Oceania January 1, 1917	55,340
Horses in the United States	24,000,000
Acres of land required to sustain horses	120,000,000
Horses displaced by motor trucks in use (est.)	2,000,000
Acres of land released by trucks for production of human foods	10,000,000
Horses and mules exported in last three years	1,232,959

products and the consumer into direct touch, thereby helping to reduce the rising cost of living.

It is easy to foresee the eventual development by the government of a complete, nation-wide system of inter-city mail and package transmission by motor wagons, which will in time, probably take over and supersede the business of the national express companies as in England. If the government, having taken over the control of the railroads, should retain such control after the war, another desirable and probable development will be the collection and delivery of package freight, just as the collection and distribution of express packages and postal matter have always been a part of the work of the express companies and the postal service.

The Postmaster General has even expressed a willingness to take over all the delivery work of the retail dry-goods merchants in New York City, the proposition being to purchase the delivery equipment of the stores and have the merchants forward all their packages by parcel

post. This is simply a variation of the co-operative delivery service that has been developed by private enterprise in dozens of small cities and towns and which has resulted in great economies. An investigation of twenty-one such co-operative services made by the Commercial Economy Board of the Council of National Defense showed that they were operated with 207 men instead of the 659 previously maintained by the various merchants.

It will thus be seen that the possibilities of transportation by motor truck have hardly been touched. In the network of highways covering the country, the 400,000 motor trucks now in service and the hundreds of thousands more that will be purchased by American factories within the next two or three years, the United States possesses a transportation resource second only to the great railroad systems of the country. Motor trucks already are supplying a yearly service of 5,000,000,000 ton-miles. It is estimated that they hauled 1,200,000,000 tons of merchandise and materials in 1917.

Motor West

LOS ANGELES-SAN FRANCISCO-PORTLAND-SEATTLE

The Motoring Authority of the Pacific Coast.
Established 1907.

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January 15, 1918

San Mateo County "Doing Its Bit" to Lose the War

SAN MATEO COUNTY, California, is blest of the gods. It is possessed of fine scenery, ideal climate, fertile fields and—last, but not least—beautiful roads. It is justly proud of its God-given and its man-made advantages. It has spent much money in perfecting its road system, and has taken steps to protect its roads and keep them in excellent repair.

But San Mateo County is running counter to the United States Government.

Uncle Sam is straining every nerve to make the inadequate transportation facilities meet the war time needs of the Government. He has taken over the railroads in order that there shall be no friction in the working out of his plans. Freight cars must be loaded to the limit, and where possible, beyond the rated capacity. Motor trucks are being used for short hauls wherever possible, and full loads are being insisted upon up to the capacity of the trucks to handle them.

San Mateo County, however, despite the transportation crisis, is insisting on merchants, farmers and other truck owners maintaining the peace-time basis of truck capacity and truck loading, and is arresting and fining those who drive vehicles over its roads which weigh, with load on, in excess of six tons. The other day a farmer, who is doubtless doing his best to help Uncle Sam in his great task, was arrested and fined \$100 for driving a truck which weighed, loaded, eight tons. A Redwood City Justice of the Peace imposed the fine, and the traffic officer who made the arrest proclaimed his intention of "going after" the farmers, lumbermen and grain haulers who drive heavy loads over the roads of the county.

An average motor truck with a capacity of five tons weighs nearly 9,000 pounds unloaded, and that proportion is maintained approximately in trucks above and below that capacity. If the San Mateo County idea were to be carried out in all the other counties of California, and in every other state in the nation, we would be con-

fronted with a situation which would seriously hamper the efforts of motor truck owners to help Uncle Sam in this emergency. It would mean that the maximum capacity of motor trucks must be limited to three tons; otherwise the owners of all trucks of larger capacity would be liable to arrest if they attempted to operate their vehicles. Further, manufacturers of motor trucks would find their market for vehicles of more than three tons' capacity utterly destroyed.

This is no time to quibble over such matters. Motor trucks, whatever their capacity, if they are to help solve the transportation problems of the nation and help win the war, must not only be allowed to operate with full loads, but, if the conditions permit, with as much of an overload as the vehicles can handle without breaking down. Speed limits might be temporarily waived to advantage also. If the roads disintegrate under the strain, they were improperly built in the first place. The remedy would seem to be the rebuilding of the roads in order to fit them to withstand the heavy traffic; not the limiting of the speed capacity and loaded weight to meet the requirements of local legislation.

It behooves San Mateo County to waken to the fact that these are war times, and to change its road ordinances to fit the demands of the situation.

Keeping Tabs on Near-Accidents

IN THE campaign to lessen the number of automobile accidents, in the progress of which "Motor West" is greatly interested, we think special mention is due the plan of the Pacific Electric Railway Co. in reporting to the California State Railway Commission, the newspaper and trade press and other interested parties all the hazards of accidents, due to carelessness or recklessness of automobile drivers, which have been brought to its attention by employees and others.

The result is a list of "near-accidents" which are made public on the theory that "the fellow who takes a chance and gets away with it, even by a narrow margin, is going to take a chance again." By publishing these reports the railway company hopes to head off the chance-takers, either by bringing the reckless ones to a point where they will stop to reason, or by pressure brought upon them by those in authority. There are no actual accidents included in these lists, for the company argues that the man who has had an accident will be sufficiently impressed to be more careful in future—or perhaps he may be dead.

The most recent list brought to our attention includes no fewer than 14 "near-accidents" which occurred in the space of five days. In each instance the number of the electric car is given along with the license number on the offending automobile and the name of its owner as shown by the State registration lists.

Cutting in ahead of fast-moving electric cars, negotiating crossings at speed in spite of wigwag signals giving warning of approaching trains, and running past cars taking on or discharging passengers constitute the bulk of the reported near-mishaps, but there are a few that are calculated to make some one's ears burn when they read the details. For instance, here is one selected at random:

At 5:18 a. m., about 500 feet from Alamitos bay, motorman on east-bound Newport car 815 stopped to avoid striking Ford machine No. 276607, which had been left standing on track. Driver was asleep on the sand about 40 feet from machine. With help of passengers on car auto was pushed off track, causing delay of

Conditions on Western Section of Lincoln Highway

H. C. Ostermann, field secretary of the Lincoln Highway Association, in his annual report makes the following comment on the work done on that section of the great highway lying in the States of Utah and Nevada:

"With other officials of the Lincoln Highway Association, including Secretary A. F. Bement, and Director F. A. Seiberling, president of the Goodyear Tire and Rubber Co., of Akron, and G. S. Hoag, Nevada State Consul of the Lincoln Highway Association, I have several times crossed the route in Utah and Nevada during the year. Trips of inspection over the famous Salt Lake Desert country have been made, covering the ground where it is proposed to reduce the mileage of the Lincoln Highway between Salt Lake City, Utah, and Ely, Nevada.

"The Lincoln Highway Association has secured a contribution of \$125,000 for this construction, near the Utah-Nevada line. Pains have been taken to complete the most thorough preliminary investigations before undertaking actual work at this point. Due to numerous restraining circumstances arising from the war, and the additional duties placed upon the officials of the Lincoln Highway Association in connection with the assistance which the National organization is giving to the Council of National Defense, it is impractical at this time to make a definite statement as to when this desert improvement work is to be undertaken.

"Every local endeavor was used during the last year in keeping the Utah and Nevada sections of the Lincoln Highway in the best possible condition for travel, and about \$150,000 was spent for this purpose from the meager road funds available.

"The Lincoln Highway drive in California is one of the finest drives in the world. Much of it is concrete, and a considerable mileage of concrete has been added during the current year at a cost of about \$133,000."

Altamont Pass Being Improved

Altamont Pass, on the last link of the Lincoln Highway between Sacramento, Cal., and Oakland, Cal., is to be improved by road and bridge work which will cost more than \$80,000. Work has begun on the closing up of a gap of 3 7/10 miles between Altamont and Greenville. Two bridges will be built over the Southern Pacific tracks, one at the joint expense of the county and the railroad and the other at the joint expense of the county, state and railroad. The work is being done by the California State Highway Commission and will complete the stretch of concrete base road from Oakland to Sacramento. Altamont Pass is much traveled by motor car traffic between San Francisco and the Bay counties and the Sacramento and San Joaquin Valley regions.

Crater Lake Park Had Good Season

Crater Lake National Park, in Oregon, seems to have had an usually good season during 1917. Despite the fact that lack of rain caused poor road conditions in the vicinity of the Park during the latter part of the season and considerably reduced the heavy volume of visitors, the total attendance during the past year totaled 12,042 persons. This number includes the passengers carried into the Park by 2,886 automobiles. Persons from six foreign countries visited the Park, one car from France, two from India, six from Canada, two from San Salvador, one from Korea and one from Cuba.

San Bernardino, Cal.—H. I. Bradley has purchased the Maxwell agency from R. H. Walter.—The Auto Electric Co. has opened here to handle and give service in Willard storage batteries.

Tire Care Means Tire Mileage

There will be over 24,000,000 tires used during the year 1917, and at least that many more tubes. According to reliable statistics, 85 per cent of these tires are prematurely worn out from neglect and abuse by car owners.

The chief reason for tires going out of service prematurely is under-inflation. Tires should be inflated to the pressure recommended by the manufacturer. A tire gauge should be used to keep the pressure constant. With tires at the proper pressure, the liability of rim cutting is decreased and the chances of a blow-out caused by casings becoming bruised is lessened.

Some car owners unreasonably blame the manufacturer when a tire is worn out after a few hundred miles of service. If these car owners had inspected the wheel on which these tires were used, they would no doubt find the wheel out of alignment, so that it wobbled from side to side, scraping and tearing the life out of the tire.

Neglected cuts and bruises often pass unnoticed, but are often a great factor in the deterioration of a tire. Small stones, sand and grit working in through these cuts quickly rots the fabric and a blow-out occurs. Large injuries should be attended to by a competent repair-man at once. Small cuts should be cleaned and sealed with cement.

Brakes should be used sparingly. Stops can be made nearly as quickly and with less fuel consumption, without any great strain on the tire, by cutting off the power of the car a few seconds before it would be customary to apply the brakes. Persistent braking of a heavy car quickly on a rough road will surely result in the tread being ground through to the fabric.

Some drivers, in order to save the mechanism of the car, run in the car tracks for a short distance. Continually doing this, however, will increase tire bills. The edge of the rails will in time cause the fabric to break and rough edges will cut the casing.

Care should be taken that oil does not collect on the tires. When fatty substances come in contact with rubber, the rubber quickly loses its strength and resiliency. Too much chalk inside the casing, to prevent the inner tube from sticking, may cause the inner tube to harden and blow-outs occur.

Tires are built to carry a certain load to conform with the size of the rim on which they are used. If a car is overloaded there is a corresponding overload on the tires, which increases the possibility of a blow-out. Cars that are used to their maximum capacity of loads should be equipped with over-sized tires.

When a blow-out occurs, with no means of repair at hand, the tire should be taken off and the rim wound with rope so that the trip may be made slowly to the nearest repair shop. Tires which are run for any distance after being deflated, are generally beyond repair. If car owners would spend a few minutes to glance over their tires after each trip, they would be repaid by more miles of service from their tires and a consequent saving of many dollars on their tire bills.

Tacoma, Wash.—The Merrill Motor Co. is the new firm title of the Oakland dealer agency here, succeeding the Lies-Merrill Motor Co.—Exclusive Oldsmobile repairing will be the business of the new repair shop of Charles Kane, located at 1135 Tacoma Ave.



New 1½-Ton Model Fulton Truck

**Herschell-Spillman Motor Larger and More
Powerful Than in Last Year's Model
—Can Carry 2 Tons**

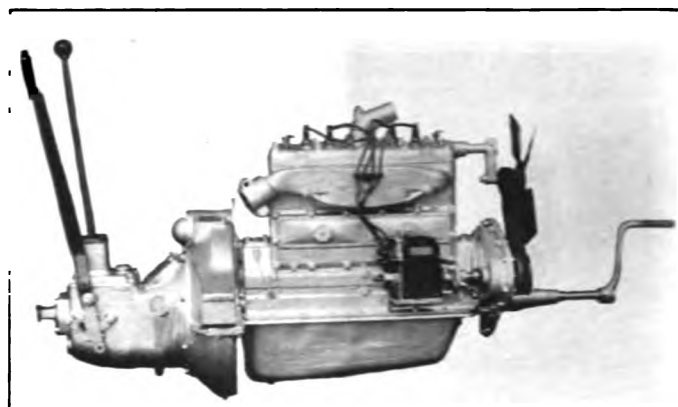
THE 1918 model Fulton truck of 1½-tons capacity has just been brought out by the Fulton Motor Truck Co., Farmingdale, Long Island. This model will be known as F-X and is an amplification of the F-1 model delivered last year, with a change in the power plant and transmission and numerous refinements to simplify operation.

The engine used in this model is of the famous Herschell-Spillman design. It is a larger and heavier engine throughout than has heretofore been used in Fulton trucks, is of L-head type with four cylinders, 3¼x5, and develops from 36 to 38 horsepower under normal working conditions. The cylinders are cast en-bloc, and each piston has four rings.

A much higher compression than before, with variable spark and other engine refinements, have resulted in the establishment of payload records in fuel consumption of from 12 to 15 miles per gallon, carrying 1½ tons on a body of 800 pounds.

These performances under varying conditions give a gasoline operating cost of from 1.2 to 1.5 cents per ton-mile and mark a new development in engine type and cost of operating for the commercial vehicle.

The valves in this unusually heavy duty truck engine of 3¼ inch bore, are larger than normal, and ignition is by Dixie magneto. A Carter carburetor is used, having but one adjustment acting on the air supply, and the engine is not governed. A speed of 25 miles per hour is attainable, though the recommendation for the truck is but 15 miles, and operating speed is left to the judgment of the driver.



POWERFUL HERSCHELL-SPILLMAN MOTOR IN FULTON TRUCK

Foot throttle and variable spark as against the set spark and throttle on the wheel used on the old model are provided for greater ease of operation, efficiency and flexibility.

Transmission is a unit with power plant, and is of three-speed type, geared to the load at 8.2 to 1 in high speed. Driving is through Borg & Beck clutch.

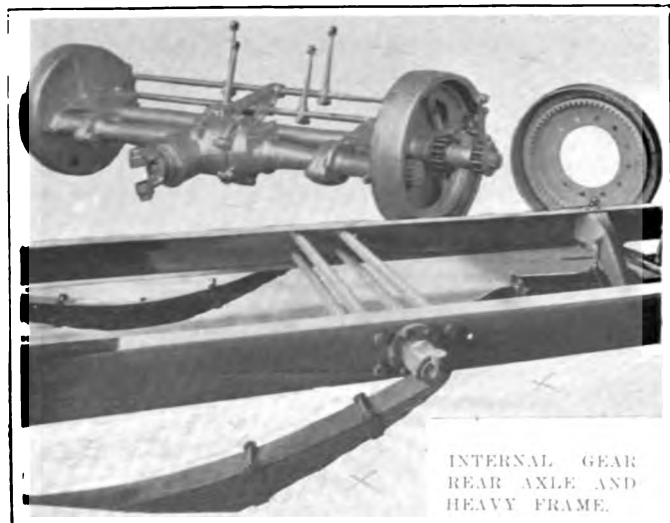
The rear axle is set well back under a load platform of 9 feet measured from the rear of the cab to rear end of frame, permitting of the balancing of the load where overhanging bodies for bulk carrying are advisable. The rear axle is of the well-known Russel internal-gear type strengthened and heavier than that used on the F-1 model of last year. The load is carried on a dead rounded axle of chrome-vanadium steel, which has been proven the most sturdy type of construction for railroad rolling stock. The jackshaft sets forward on the dead axle, which shortens the length of the drive shaft and adds sturdiness to that member. The front axle has been slightly enlarged and strengthened.

The frame of the Fulton truck is of full two tons capacity, and has not been changed since the company's first models were brought out. The distinctive Fulton radiator, rounded hood and tank on dash with gravity feed are also unchanged.

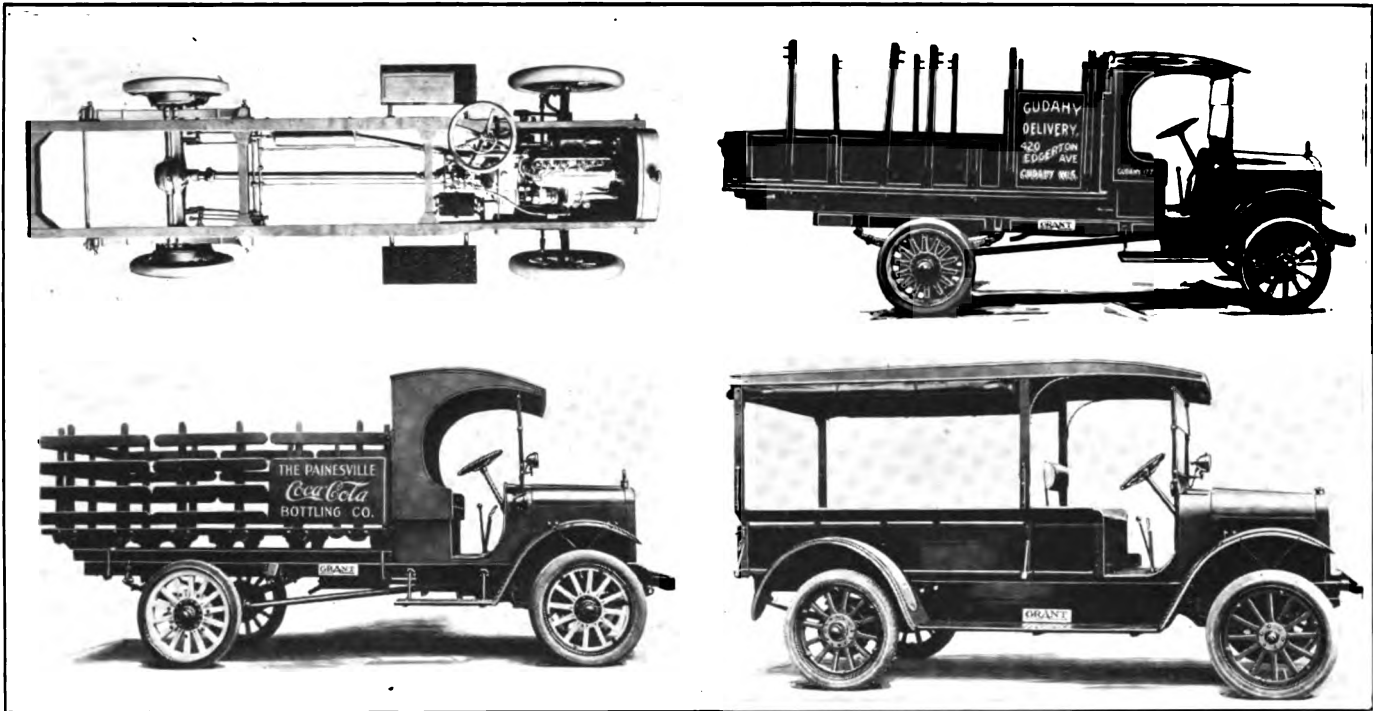
The brake arrangement has been changed to bring the brake rods inside the frame, and supply heavy equalizers, easily accessible, just behind the dead rear axle. This arrangement eliminates the necessity of frequent brake adjustments so usual on trucks handling variable loads.

Spring are now supplied with 11 leaves instead of 10, and all leaves are made from heavier stock. Spring eyes are double wrapped, thus bringing two leaves over the forward rear spring pin to give ample surplus resistance to the thrust of the Hotchkiss type drive. This drive is through the springs, and the frame is cleared of all torsion rods and struts.

A change to heat-treated malleable castings and drop forgings in numerous parts for greater toughness and strength; new hood fasteners, change in the steering column assembly, a new radiator support, new starting crank bearing, grease cups instead of oil cups, lamp brackets on the dash, heavier fenders, castellated nuts and jam nuts on all the bolts, and many other improvements are included in the new design. The tire equipment is of 34x3½ front, and 34x5 rear, single solid tires of standard makes.



INTERNAL GEAR
REAR AXLE AND
HEAVY FRAME.



THE NEW LINE OF GRANT TRUCKS—(Upper Left) Plan View of Chassis. (Lower Left) Model 10, 1½-Ton Job. (Upper Right) Model 15, 2-Ton Truck. (Lower Right) Model 12, 1800-pound delivery.

Grant Trucks in Five Models

Cleveland Company Announces Line of Commercial Vehicles for Every Purpose and at Moderate Prices

ELECTRIC starting and lighting, with spring cradle battery suspension, straight-line drive, transmission-driven governor, cushioned radiator carrier and equipment of unusual completeness, are the features of the line of trucks which are produced by the Grant Motor Car Corporation of Cleveland. Though now known as Grant trucks, they are really a continuation of the successful Denmo line formerly manufactured by the Deneen Motor Co., of Cleveland, which company was bought by the Grant Company some two or three months ago. With the greater facilities, including a new factory just nearing completion, the production of Grant trucks will naturally be on a very much greater scale than the output of the truck under the former name.

The models now being built include an 1800-pound truck known as the Model 12; a 1½-ton truck known as the Model 10, and a 2-ton truck known as Model 15. In addition there are Model 11, which is the same capacity as Model 10, but with longer wheelbase and loading space, and Model 16, which is the same as Model 15, but longer in wheelbase and loading space.

A distinctive feature of the Grant truck is the unusually large space for pay-load, back of the driver's seat. In the Model 12 this space is 7 feet; in Models 10 and 15, 9 feet; in Models 11 and 16, 11¼ feet. Another feature of the Grant trucks is the fact that only 63 per cent of the pay load is carried on the rear axle.

This line of trucks, under the name Denmo, was one of the first to use a successful electric lighting and starting system. In Grant trucks the battery is carried in a patented spring cradle and is less subjected to shock than the battery of a passenger car. All Grant models are alike in the following specifications: Dixie high-tension magneto ignition, Bijur two-unit starting and lighting equipment, Grant-Lees transmission, Pullman car type frame.

On the Model 12 (1800-pounds) truck, front and rear wheels are the Goodrich steel felloe type; tires are 32x4 pneumatic. On Models 10 and 15 steel felloe, front wheels with pneumatic tires are standard equipment, with 34x4½ pneumatic tires, but 34x3½ solid tires are optional; rear tires are 34x4 solid.

The Model 12 has 27 horsepower, 3¼x5 bore and stroke, four-cylinder engine. Models 10 and 15 have 35 horsepower 3¼x5 bore and stroke, four-cylinder engine. All models have combined forced feed and splash lubrication and unusually large Fedder's cellular type radiator and thermo-siphon system. The fan runs 30 per cent above engine speed.

In all models the equipment is unusually complete and includes complete instrument board with speedometer, ammeter, lighting switch, ignition switch, oil gauge and carburetor choke. All models have front bumpers, head and tail lights, rain vision windshield, horn, tools, pump, spare rim and spotlight. On Models 10 and 15 the equipment also includes Motometer.

Grant trucks are priced as follows: Model 12 with flare-board express body, canopy top with curtains, completely painted, \$1020; with panel body, completely painted, \$1065. Model 10, 1½-ton capacity, wheelbase 124 inches, weight of chassis 3050 pounds; chassis only, \$1490. Model 11, same as Model 10 but with 140-inch wheelbase and 135 inches of loading space back of seat; chassis only, \$1585. Model 15, 2-ton capacity, 124-inch wheelbase, weight of chassis 3400 pounds; chassis only, \$1790. Model 16, same as Model 15 but with 140-inch wheelbase and 135 inches loading space back of seat; chassis only, \$1885.

Cadillac Auto Truck Co. Now "Acme Motor Truck Co."

The Cadillac Auto Truck Co., Cadillac, Mich., manufacturers of the Acme line of trucks, has changed its corporate name, and will henceforth be known as the Acme Motor Truck Co.

The name "Acme" was adopted by this company immediately after its organization, and later copyrighted. All the advertising and literature of the company has constantly been prepared to emphasize and create a value for the name "Acme," and in consideration of the extensive general advertising campaigns which the company is to conduct from this time on, action was taken to change the corporate name to Acme Motor Truck Co.

Motor Truck Convoy Reaches Destination

The train of motor trucks which left Detroit factory on December 14th reached the Atlantic seaboard at Baltimore two weeks later after a leisurely trek of 568 miles. But one of the thirty trucks failed to reach its destination, having been demolished by a passenger train while en route from Ravenna to Warren, O. The driver was killed. The convoy was made up of twenty-eight Packard three-ton trucks, two Packard oil tank trucks, a General Motors light ambulance truck, a Dodge light delivery truck, a Dodge five-passenger touring car and a Dodge roadster.

A feature of the journey was the fact that none of the drivers had ever before driven a motor truck, having been taken from an infantry camp and placed at the wheel.

Despite the heavy storms and the zero temperatures encountered on the way, the test was so successful that six more similar convoys will leave Detroit in a few days carrying supplies to the seaboard, after which they will be loaded on steamers for service abroad.

4100 Trucks Ordered for Aircraft Division

Contracts have been awarded for 4,100 trucks for the Aircraft Division of the Signal Corps, as follows: 1½-Ton Trucks—General Motors Truck Co., 700; Republic Motor Truck Co., 500; Denby Motor Truck Co., 500; Signal Motor Truck Co., 500. 3½-Ton Trucks—Federal Motor Truck Co., 500; Kelly-Springfield Truck Co., 500; Velie Motor Co., 400; Standard Motor Truck Co., 250; United Motor Truck Co., 250. These trucks are to be delivered early this year.

Here Are Some Interesting Trailer Truths

The motor truck trailer is just now coming into its own, according to Leigh Lynch, sales manager Columbia Motor Truck and Trailer Co., Pontiac, Mich. While the necessity for conservation of resources brought about by the war is in no small measure responsible for the rapidly increasing demand for the trailer, the natural tendency of the commercial world toward the greatest efficiency at the least cost is undoubtedly the main factor in this demand.

The first difficulty against which the truck dealer runs in considering the trailer, in the opinion of Mr. Lynch,

is the fear that the total sales of trucks will be decreased by its use; but this idea is not grounded on fact, any more than was the fear of the factory workers of some decades ago that the incoming of labor-saving machinery would decrease the amount of work and thus leave thousands to starve.

Every year records new inventions of labor-saving machinery, but the output of machinery, instead of decreasing, has increased tremendously. This line of reasoning is as true when applied to the motor truck as the fact that the motor truck is machinery. Discover and apply new methods of making the motor truck more effective, more profitable, and there will follow an immediate increase in the demand for the motor truck, just as surely as if the price of the truck were lowered. Yes, more surely; for in lowering the first cost of the truck itself the consumer does not save as much as if the first cost and the operation cost were both lowered. And the trailer lowers both. Increasing the capacity of the truck by giving the user practically two trucks, the first cost is in reality lowered, and the operation cost for haulage largely decreased.

Another factor of considerable importance from the consumer standpoint is the fact that the motor truck will haul more than it will carry, even as a horse will draw more than it will bear. The trailer's efficiency is thus founded upon a law of nature. There is not the least doubt that the trailer will greatly increase the sales of the motor truck, even as it increases the motor truck's utility.

U. S. Truck Builds 150 a Day

The United States Motor Truck Co., Cincinnati, O., recently increased its production to 150 trucks daily. Materials have been accumulated by the company to take care of this increased output. The plant's capacity will be quickly doubled by building additions to hold the stores of material and an entire extra floor will be added to the assembling department.

Duplex Advances Truck Price

The Duplex Truck Co., of Lansing, Mich., has raised the price on the Duplex four-wheel drive truck from \$3,600 to \$4,000. The new price includes the war tax. The original truck made by the Duplex Truck Co. recently celebrated its tenth birthday while making deliveries of freight around the company's factory.



ECONOMICAL DELIVERY OF FIFTY MAXWELL TRUCKS AND FIFTY PASSENGER CARS FROM DETROIT TO CHICAGO.

Economical measures were recently adopted to supply the demand for trucks and passenger cars when the Maxwell Co. executed a novel drive away of fifty trucks loaded with fifty passenger cars. The fifty loaded trucks were driven from Detroit to Chicago. Freight congestion was greatest just before Christmas when it became necessary to make a quick delivery in Chicago of fifty trucks and fifty passenger cars. Some plan had to be evolved immediately—and it was. Fifty sturdy Maxwell one-ton trucks were prepared with proper blockings to carry passenger cars. By not allowing an empty truck to leave the great Oakland Avenue plant the Maxwell company gave a splendid demonstration of how economy in transportation may be accomplished. The overland truck train released a train of thirty freight cars for other transportation very easy. Care was taken to provide against any load-shifting and the trucks took up their trail to the Windy City. The train was piloted by Ray McNamara, the famous Maxwell road engineer. A large portion of the drive was over snow and ice-covered roads. The last lap of the truck train was from Coldwater to Chicago in one day, a distance of 167 miles. The train moved out of Coldwater in two sections—25 trucks to a section. McNamara reports a remarkably successful trip, with some of the fifty drivers inexperienced.

MOUNT LOWE



The crowning glory
of the Southland—
Towering 6100
feet in the air.

*Never a More Opportune Time
to Behold Its Scenic Beauties*

**ROUND TRIP FARE \$2.00
FROM LOS ANGELES**

Cars leave Pacific Electric Station, Los
Angeles at 8, 9 and 10 a.m., 1:30 and 4 p.m. .

Pacific Electric Railway

Keep Trucks Busy to Prove Their Efficiency

According to John F. Bowman, vice-president of the Acason Motor Truck Co., Detroit, Mich., motor trucks will not show up well when the books are audited at the end of the year if they are allowed to stand idle several hours each day. They must be kept busy if they are to prove their supremacy over the horse. In other words the percentage of time the truck is merely waiting to be loaded or unloaded must be decreased to the lowest possible degree in order to cut the cost of operation to the minimum and show the best results in work done, speed of operation and final profits.

In many cases much better results can be obtained by the use of a tractor-truck. With an outfit of this kind it is possible to leave the loaded wagon to be unloaded and return to the plant where another wagon has been loaded in the meantime. This method cuts down the delay and makes it possible to use common labor instead of holding up the truck and truck driver while the truck is being loaded and unloaded. The haulage problem is not solved with the manufacture or purchase of a good truck. There are other factors that enter into the matter and they must be studied by experts.

Detroit Shell Co. Formed from Members Industry

Organized within less than twenty-four hours and with a capitalization of \$2,000,000, the Detroit Shell Co. has been formed in Detroit as a result of the work of the Automobile Industries Committee, composed of Hugh Chalmers, A. W. Copland and John R. Lee. Some of the most prominent men in the automobile industry and its manifold ramifications are officers of the company. John Kelsey, of the Kelsey Wheel Co., is president. Other officials are R. B. Jackson, of the Hudson Motor Car Co., vice-president; Harry M. Jewett, Paige-Detroit Motor Car Co., vice-president; J. Walter Drake, Hupp Motor Car Co., secretary; and Edsel Ford, Ford Motor Co., treas-

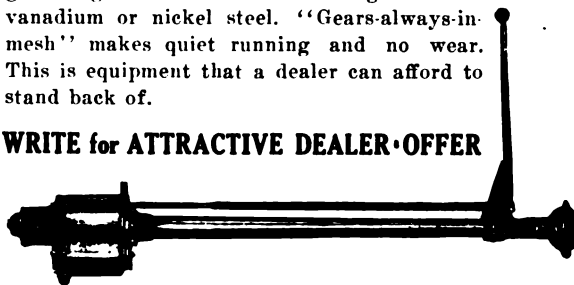
Easy Cranking Neutral

**CRUMP'S FORD TRANSMISSION
(AUXILIARY)**

Positive neutral makes cranking easy. Crump's auxiliary gives a positive neutral and adds two speeds forward to the Ford. Lever control **auxiliary** to the Ford pedals. Completes the range of control, the lack of which makes the Ford truck only half efficient. Auxiliary low will ease the way out of a mud-hole or start on any grade. Auxiliary intermediate gives a slow speed **without heating**.

Sound construction makes long wear. Hardened and ground gear steel. Ball bearings. All shafts of vanadium or nickel steel. "Gears-always-in-mesh" makes quiet running and no wear. This is equipment that a dealer can afford to stand back of.

WRITE for ATTRACTIVE DEALER OFFER



Sole Manufacturers and Distributors

L & B TRUCK MANUFACTURING CO.

1416 S. LOS ANGELES ST.,
LOS ANGELES, CAL.

HARROUN

A car of popular price, designed
by Ray Harroun, in which a new
type of four-cylinder motor develops
revolutionary power and efficiency.

Harroun Motors Corporation

General Offices and Plants, Wayne, Mich.

urer. The executive board consists of H. M. Jewett, Walter E. Flanders, Maxwell Motor Co.; Max Wollering, Studebaker Corp.; and A. Demory, Timken-Detroit Axle Co. Having been organized, the new company will immediately start work on a \$30,000,000 munitions contract, employing between 8,000 and 10,000 men. The Automobile Industries Committee, of the War Industries Board, was moved to take up the work of organizing the new munitions company out of the personnel and resources of the automobile industry through the request of the ordnance board, which has come to realize that the automobile industry is best fitted for quantity production of shells and munitions.

San Francisco, Cal.—A. G. Somerville has leased quarters on Gough St. south of Fulton St.—The Golden Gate Auto Co. has leased one-story quarters at 348-50 Golden Gate Ave.

Apperson Models for 1918

Old-Established Company Announces Its Silver Anniversary Offerings in Six- and Eight-Cylinder Cars

THE Apperson Brothers Automobile Co., Kokomo, Indiana, announces the Silver Anniversary models for the season of 1918. A quarter of a century devoted to the manufacture of the passenger motor car permits this old and well-established company to offer to motorists in the construction of their product that which 25 years of experience has taught them.

At no time has this company been extreme in body design. From the views shown, beautiful lines are easily detected, but at the same time comfort for the passengers is still maintained. Roomy seven-passenger and the original type four-passenger chummy roadster bodies are mounted on both six-cylinder and eight-cylinder chassis. The Touring Sedan body is mounted on the eight-cylinder chassis only. Both chassis are equipped with Apperson make of motor, transmission and rear axle. In fact, 90 per cent of the units that make up this car are manufactured by the Apperson Company in their two well-equipped plants.

The regular Apperson chassis, known as the 8-18, is equipped with Apperson type demountable rear axle and I-section drop forge front axle; three-quarter elliptic spring in the rear and semi in front. Shock absorbers attached to the front do their share to make these models the exceptionally easy-riding cars that they are. Fuel is taken from a tank in the rear with the assistance of the vacuum feed system. The double-bulbed headlights offer the dimming device without the addition of any special lens.

The three-plate dry disc clutch is also Apperson design and make, and the electrical equipment specially constructed for the Apperson car is of the double unit type. Starting motor and generator are entirely separate.

Rim-wind eight-day clock and dial speedometer are both conveniently placed on the instrument board. A large size horn signals the approach.

The Apperson method of handling the control of the eight-cylinder valve mechanism is to operate the valves with as few cams and cam-shafts as possible, on the accepted theory that the fewer working parts in a motor the more satisfactory is its operation. The Apperson engineers found that but one camshaft was necessary and but two gears were needed to operate them. This was accomplished by redesigning the camshaft with one cam to each push-rod. No other change was necessary with the exception of the change in the angle of the valves and push-rods. These were rearranged so that the center of the camshaft was in direct line with the center line of the valves and push-rods. This change has accomplished two things: First, the valve action is more positive with



SOME APPERSON MODELS—(Top) The Chummy Roadster. (Center) Eight-Cylinder Touring Car. (Bottom) Eight-Cylinder Touring Sedan

the new arrangement, the action being carried direct from the cam to the valve through the push-rod, and, second, the new construction has eliminated over eighty working parts, which feat alone is an added proof that the designers of the Apperson are at the top of their profession.

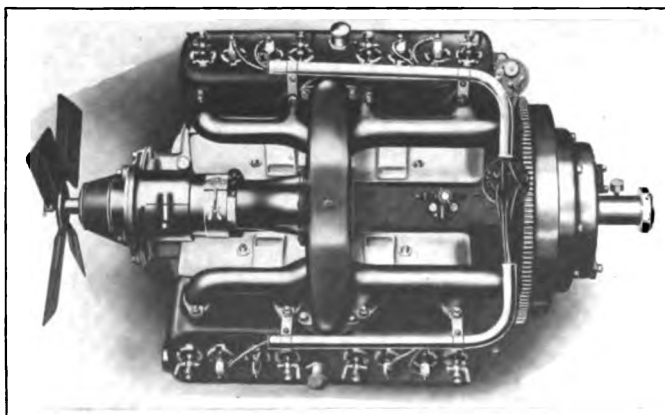
Touring Lower California in Liberty Six

A tour of investigation through the Northern District of Lower California undertaken by Mary White, writer, authoress and investigator, and her party, was recently completed in a five-passenger Liberty Six. The tour was prompted by a general lack of knowledge in regard to that wonderfully promising region, with its actual and potential riches in live stock, agricultural yields, and the products of mining and other industries.

The five days' trip over the most varied of roadways, over boulevards, through deep sands, over steep grades and under most trying conditions, was completed without accident or repair of any nature, excepting one puncture. The regular stock Liberty Six touring car was loaded down with four passengers and eight personal and photographic grips and suitcases.

Cheaper Solvent Gasoline

Considerable quantities of gasoline are used as a solvent for rubber doughs and cements in making automobile tires. A small factory making 1,500 tires a day, will use 12,000 gallons of gasoline monthly, while a large factory will require 10,000 gallons daily. Increased cost of gasoline has led the chemists of the Republic Rubber Co., Youngstown, O., to experiment with solvent gasoline of lower cost, made by cracking heavy kerosene and other heavy oils. It has been found that preparation of such solvent gasoline is not difficult and lowers costs when a supply of heavy kerosene or fuel oil can be obtained at reasonable prices.



LOOKING DOWN ON APPERSON EIGHT-CYLINDER MOTOR.

San Francisco Show Number February 15th.



Foresight Sell Motor Trucks *Pick the right Truck and "Win"*

The U. S. is the truck account of the hour.

Keep your business booming—Sell trucks and **MORE TRUCKS** as the enormous demand for war-time transportation increases.

You know the **BIG STIR U. S. TRUCKS** have made in the truck world.

The U. S. is a **HIGH GRADE, HIGH QUALITY** truck.

For nine years it has made **GOOD**.

Half of all U. S. Owners have placed repeat orders. Built in the largest exclusive heavy duty truck factory in the country.

Backed by financial strength, harmonious organization and a strong co-operative policy.

The organization behind the U. S. is modern in spirit—it knows how to **CO-OPERATE**.

TODAY is the psychological time to **THINK—THINK QUICK AND ACT**. Don't let the other fellow beat you to it.

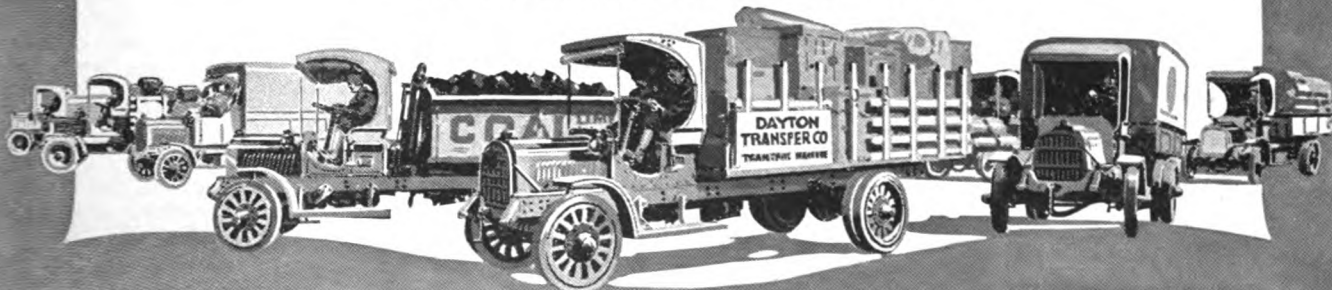
Get aboard immediately—**AND WIN**.

Are you the future U. S. Dealer in your town?

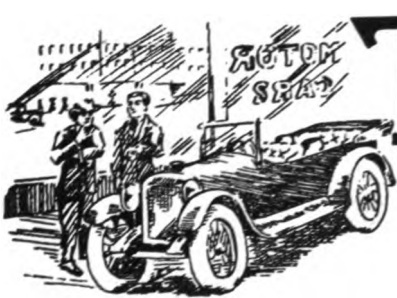
Wire us your name today.

The United States Motor Truck Company Cincinnati, Ohio

New York, Philadelphia, Baltimore, Pittsburg, Cleveland, Denver, Detroit, Chicago, Atlanta, St. Louis, Boston, Minneapolis
DEALERS IN ALL COMMERCIAL CENTERS.



U.S. MOTOR TRUCKS



Trade Briefs and Factory Gossip

Maxwell Progress in Four Years.

Maxwell production has increased wonderfully in four years—so much so, in fact, that the original buildings of 1913 are now but a small group almost completely overshadowed by modern factories of the most improved construction in which hundreds of passenger cars and trucks are being made daily. In Detroit, on Oakland avenue, building has been continuous in order to keep up with an ever-increasing demand. In Minneapolis and Kansas City, towering assembly plants have been erected—again the result of far-sightedness and business strategy. In Windsor, Canada, just across the river from Detroit, is another assembly plant, just completed and now ready for occupancy. This Canadian institution will take care of the host of Maxwell owners, actual and prospective, in the Dominion. All these plants are industrial cities in themselves and monuments, every one, to the product and to that leadership which made such a product possible.

* * *

Wield Fisk Assistant Sales Manager.

F. H. Ayers, sales manager of The Fisk Rubber Co., Chicopee Falls, Mass., announces the appointment of William Wield as assistant sales manager. Mr. Wield came with the Fisk organization over a year ago to do some special work for the Sales Department. Previous to his Fisk connection he was with the Hudson Motor Car Company, in New York City, so that he not only has a knowledge of the tire business but the automobile business as well.

* * *

Jordan Sales Increase 30 Per Cent.

The financial report of the Jordan Motor Car Co., Cleveland, for the quarter ending January 1st shows an increase of 30 per cent in sales of Jordan cars over the corresponding period last year. The total sales for the quarter amounted to \$590,826.55, which represents a profit of \$50,302.55, or 16.7 per cent on \$300,000 preferred stock, equivalent to 66.8 per cent for the year.

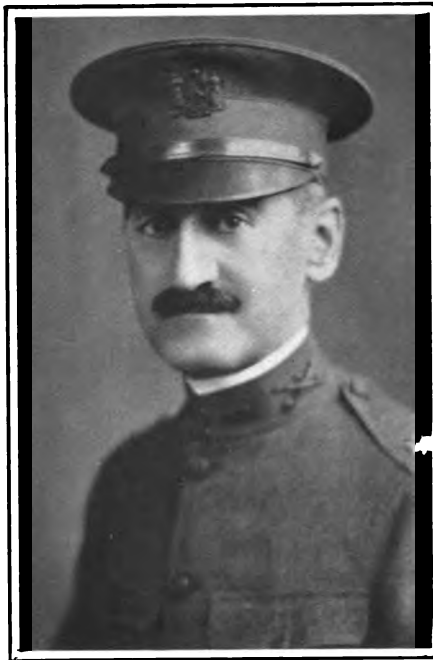
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Lehmkuhl With Air-O-Flex Corp.

Charles D. Lehmkuhl, who was for nine years credit manager of the E. R. Thomas-Detroit Co., and of its successor, the Chalmers Motor Co., has become secretary and a director of the Air-O-Flex Automobile Corporation, succeeding G. L. Nadel, who has retired on account of other business interests necessitating his absence from Detroit a large part of the time.

Alvin Predicts Higher Truck Prices.

Forrest J. Alvin, general manager of the United States Motor Truck Co., has sent assurances to every dealer and distributor of the company, that all orders for trucks for 1918 will be taken care of, but has told all that it will be necessary to place orders ahead with bona fide shipping directions, enabling the company to make the necessary arrangements for transportation. Guarantee of delivery on specified orders is given. Mr. Alvin points to the fact that wise business men are placing their orders at this time for future delivery and taking advantage of prevailing prices, as he



MAJOR WILLIAM C. BARRY
General Manager Selden Truck Sales Co., Rochester, N. Y., Who Has Joined the Colors.

intimates that prices of material and other expenses may result in other increases in truck prices later, made necessary by the times.

* * *

Coleman Selden Factory Manager.

J. R. Coleman, who has been chief engineer and assistant general manager of the Atterbury Motor Car Co., Buffalo, N. Y., and prior to that with the Packard company, on January 1st assumed the duties of factory manager in charge of production and purchasing, with the Selden Motor Vehicle Co., Rochester, N. Y. The Selden Co., to take care of their increased business, is building a large addition to their present plant.

Justice for the Star Rubber Co.

The Star Rubber Co., of Akron, Ohio, asks "Motor West" to make it plain to Pacific Coast motorists that it has absolutely nothing in common with the Star Tire Co., and the Hercules Tire Co., of Philadelphia, an expose of whose methods recently appeared in the New York Tribune. The Star Rubber Co., of Akron, O., manufactures one of the highest-grade tires made in this country, and the similarity in name with one of the companies exposed by The Tribune may cause misapprehension in the minds of some of the many owners of Star-equipped cars here on the Pacific Coast who may have read The Tribune article. The New York branch of the Star Rubber Co. is doing business under the title of the Star Tire Co., and "Motor West" is glad to do anything in its power which shall help to draw a sharp line of distinction between it and the company of the same name which was exposed in The Tribune article. The Star Rubber Co., of Akron, O., is financed by large stockholders of other successful rubber companies, and it is entitled to every possible consideration that honorable business dealing and life-long reputation for high business ideals warrant.

* * *

Kissel Contract Goes to Garford.

Because it will need all its facilities to handle contracts for four-wheel-drive trucks, the Kissel Motor Car Co. has been released from its contract to supply the Government with 500 Class B heavy-duty war trucks. The contract was transferred to the Garford Motor Truck Co., which makes a total for that company of 1,000 trucks to be supplied to the Government.

* * *

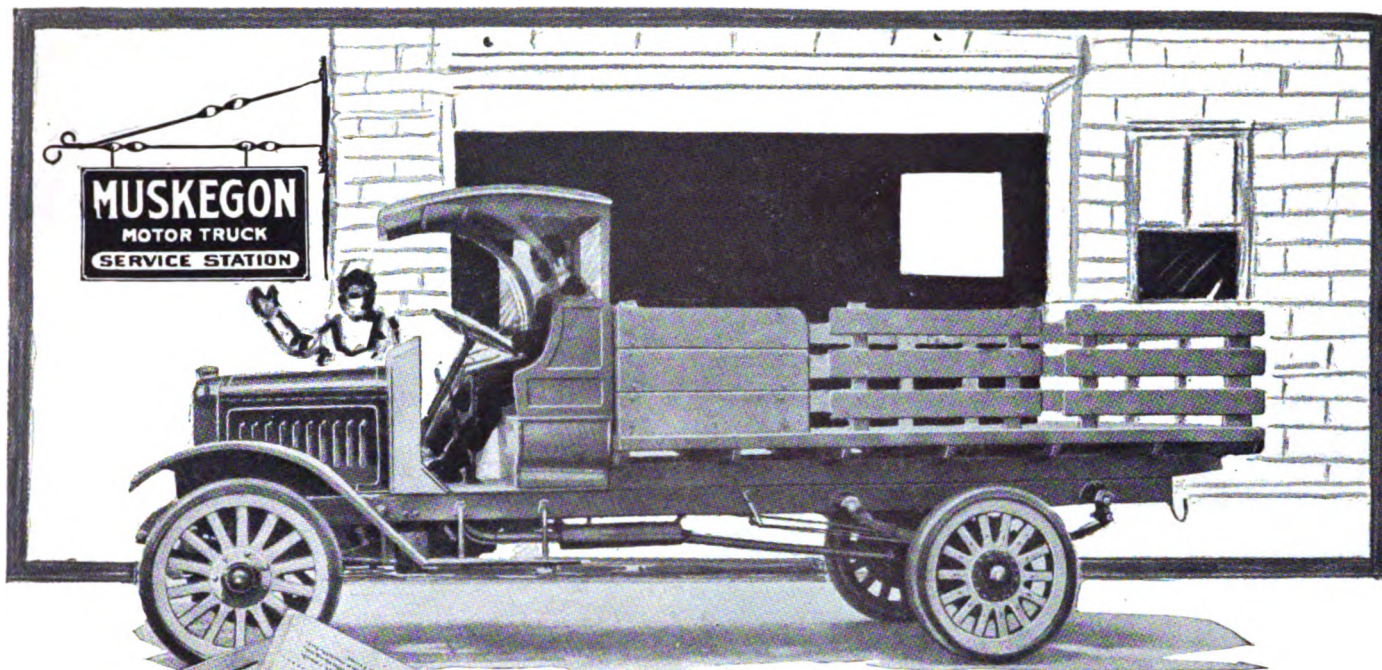
Makes Record With Puente Gas.

Miss Katherine Stinson, who recently flew from San Diego to San Francisco, 610 miles, in 9 hours, 10 minutes, surpassing the previous non-stop record of Miss Ruth Law, 512½ miles, used Puente gasoline, made in California. Her fuel supply, taken on at North Island aviation grounds, at San Diego, consisted of 76 gallons of 64-degree aviation gasoline, manufactured by the Puente Oil Co., of Los Angeles.

* * *

Ajax Warehouse for Brooklyn.

The Ajax Rubber Co., of New York City, will erect a warehouse in Brooklyn, on Long Island, upon a large tract of land purchased by the company for that purpose.



AN ADDITIONAL GUARANTEE OF UNUSUAL PERFORMANCE

Upon the delivery of a Muskegon Motor Truck, the Muskegon Engine Co. will issue to the owner a coupon book, good for free service labor on this truck.

These coupons may be presented at any Muskegon Motor Truck Service Station in the United States or Canada in payment for service.

Each coupon is stamped with the month and year in which it must be used, to insure a regular monthly inspection of the owner's truck.

This service prevents perverse conditions from developing and is an additional guarantee of unusually efficient performance.

MUSKEGON FREE SERVICE

A BIG HELP TO THE DEALER A TREMENDOUS HIT WITH THE OWNER

The dominant idea behind the Muskegon Motor Truck is to guarantee every purchaser a degree of service that will insure the maximum efficiency of his truck all the time, day after day, year after year.

We start him with a truck that fairly dominates the 2-ton field, a truck specially designed and constructed exactly to fit the service it will be called upon to give.

Then, to guard him further against the neglect or ignorance of inexperienced drivers, we have established Service Stations all over the country to assure every Muskegon owner a full realization of his truck's super-efficiency.

This service is free to all purchasers of Muskegon Trucks, and covers a period of 12 months after purchase—ample time to train even a novice in the proper care and maintenance of a truck. The owner is entitled to a monthly inspection and any necessary service work during the whole of this time, as well as the instruction of his driver in the proper care of the truck.

This is the first nationally operated system of inspection and service given free to owners regardless of where they purchased their trucks.

Combined with the absolute guarantee of entire excellence that goes with every Muskegon Truck, it forms the strongest assurance of satisfaction a truck owner can possibly obtain.

*Dealers find our terms unusually profitable
and our service unequalled.*

MUSKEGON ENGINE CO.,

Muskegon, Michigan

Moline and Root-Van Dervoort Merge.

There has been a consolidation of the Moline Automobile Co., makers of Moline-Knight motor cars, and the Root & Van Dervoort Engineering Co. into Root & Van Dervoort Engineering Co., of East Moline, Ill., an Illinois corporation. The officers and management remains the same and there is no change whatever other than in the name of the company. In the past these two companies have always been virtually synonymous, operating, however, under the two firm names under the control of the same general officers. For the season of 1918 Root & Van Dervoort Engineering Co., in addition to building Moline-Knight automobiles will have a big production of stationary engines, tractor and automobile motors, besides filling large United States Government contracts. The Moline-Knight automobiles will be built in two chassis, one 40 horsepower and the other 50 horsepower, known as the Models "C" and "G" respectively, with prices running from \$1650 to \$2280.

* * *

Dugan Mgr. U. S. Truck Plant.

W. E. Dugan has been appointed factory manager of the United States Motor Truck Co., at Cincinnati. Mr. Dugan was formerly with the Selden Motor Vehicle Co. at Rochester, N. Y., where he had charge of building the first Liberty truck of the Class B type. A recent report from Washington credited the United States Motor Truck Co. with the receipt of an order for 500 of this class of truck for the government.

Goodriches With the Colors.

Charles C. Goodrich, director of The B. F. Goodrich Rubber Co., and son of its founder, Dr. Benjamin F. Goodrich, is following in the footsteps of his brother, David M. Goodrich. He has received a commission from the War Department in the ordnance branch of the service and is scheduled to sail for France in a few days. Dave Goodrich, also a director of the rubber corporation, is a major of infantry. The war spirit seems to be a heritage, as their father served in the Civil War.

* * *

Hernandez With Carlisle Tire.

R. M. Hernandez, for ten years with the United States Tire Co., in the Central States, has been appointed central district manager for the Carlisle Cord Tire Co., Inc., with headquarters at Chicago.

* * *

Wellman Adv. Mgr. Moline Plow Co.

Fred Wellman, formerly advertising manager of the Olds Motor Works, has joined the advertising staff of the Moline Plow Co., at Moline, Ill. This company, besides building a complete line of farm implements, manufactures the Moline Universal tractor, and is the largest producer in the tractor industry. The company also builds the Stephens Six automobile, producing about 3,000 cars per annum.

* * *

Berg With Champion Ignition Co.

Joseph Berg, who for some time has been connected with the Stewart-Warner Speedometer Corporation as chief engineer, has resigned to accept a position with the Champion Ignition Co., Flint, Mich.

U. S. Truck Co. to Triple Output.

"Motor trucks are to win the war." That was the chief point in an address to the officials and department heads of the United States Motor Truck Co., made by General Manager F. J. Alvin, at a recent dinner given to his business associates at the Industrial Club in Covington, Ky. The U. S. Motor Truck Co. has been exerting itself to the utmost to bring its production abreast of the demand during the past year, and the entire party pledged its determination to increase the output at least three times during 1918.

* * *

Westinghouse Declares Dividends.

The Westinghouse Electric & Manufacturing Co. will pay its regular quarterly dividend of 1 1/4 per cent on preferred stock, Jan. 15. The dividend amounts to 87 cents a share. A quarterly dividend on the same rate and for the same amount on common stock of the company will be paid Jan. 31.

* * *

Ahlberg Takes Conrad License.

The Ahlberg Bearing Co., of Chicago, has become a licensee under the Conrad annular ball bearing patents. The license was issued by the Hess-Bright Mfg. Co. and permits the Ahlberg Bearing Co. to act as reconstructor of Conrad type bearings.

* * *

Broderick With Burd Ring Co.

E. N. Broderick, well known in jobbing circles, and an expert salesman in the line of automobile accessories, has been appointed special representative by the Burd High Compression Ring Co., of Rockford, Ill.



SCENE AT ANNUAL BANQUET GIVEN AT TOLEDO CLUB BY THE CHAMPION SPARK PLUG CO. TO SALES FORCE AND JOBBERS.

Viewing optimistically the future for spark plugs and other motor essentials, the Champion Spark Plug Co. during its convention in Toledo on December 17-22 started a campaign which will tend to create confidence in trade circles. Sixty members of the sales force, together with a score of jobbing representatives from all sections of the United States and from Canada, together with men of national prominence in advertising and motor circles, were in attendance at this meeting. No opportunity was overlooked to impress upon the members of the sales force that in spite of the war and other alleged discouraging conditions, the Champion Spark Plug Co. viewed the business outlook for the year 1918 with nothing but optimism. That the company anticipates a material increase in business was evident from statements made by the fact that extensive plans have been made for increased production. The automatic machine capacity—machines that turn out the steel shells for spark plugs—were practically doubled after January 1st.

The program for convention week included class meeting sessions, round table discussions, get-together meetings, indoor athletic meet, a trip to Detroit and various social functions. Sixty-odd men, including R. A. Stranahan and F. D. Stranahan, president and treasurer, respectively of the company, appeared in the various athletic events. One entire day was taken up by a complete outline of the publicity campaign the company will wage during the coming year and with talks by men interested in various lines of advertising. Harris L. Corey, advertising manager, outlined in detail the schedule which has been arranged. The annual banquet of the Champion Spark Plug Co.'s sales and office force was held Tuesday night. On "jobbers' day" the officials and representatives of many of the larger jobbing houses in various cities were honored guests at the day's sessions, and at the annual banquet which followed.

Each day during the convention the company published a newspaper known as "The Champion Spark, For Champion Spark Pluggers." These papers reached the delegates during luncheon hour and contained reports of the preceding day's activities, together with reviews of talks of various speakers, cartoons of the social events and outlines of the program for the succeeding day. "The Spark" is to become a semi-monthly publication, beginning January 1st. F. B. Casswell was in complete charge of the convention activities.

DENBY 5 TON

This heavy duty truck rounds out the Denby line and, more than ever, makes the Denby agency the most profitable connection you can make.

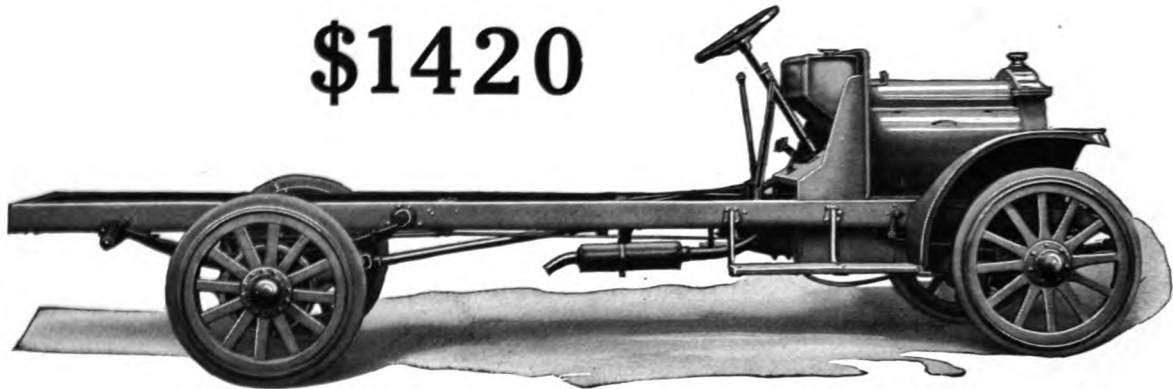
Make us prove it to you *today*.

Denby Motor Truck Company
Detroit



FULTON MOTOR TRUCKS

1½ Tons Capacity
\$1420



THE Fulton Chassis has been amplified in the new FX Model for 1918, and still stands as the most powerful, sturdy and lowest-priced truck in its class.

Its power plant is of the famous Herschell-Spillman design.

Its Russel rear axle, of internal-gear type, is known countrywide.

Its frame is full two ton size.

Its loading platform of 9 feet from rear of cab to end of frame is ample and roomy.

Its rear axle is set back to balance overhanging bodies.

The Fulton radiator is not surpassed by any other radiator or any truck at any price.

Low operating records of 1.6 cents per ton mile in gasoline consumption has made hundreds of Fulton sales and will continue to stand in the record class.

Dealers are urged to critically inspect the Fulton chassis at the Chicago Show.

Chicago Show Exhibit—Auditorium Hotel

Fulton Motor Truck Company
Farmingdale—Long Island—New York

Distributors in—Boston, Hartford, Providence, New York, Trenton, N. J., Newark, N. J., Philadelphia, Scranton, Pittsburg, Buffalo, Rochester, Detroit, Minneapolis.

FULTON

MOTOR TRUCKS



THE sale of Commercial Trucks affords a quick and logical solution of the business problem precipitated by a startling shrinkage of the public interest in pleasure cars.

One source of income has been curtailed.

Another must be opened.

Today is the time to seek a truck agency contract—the Fulton contract, if your territory is open.

You will need this truck business.

You can get deliveries.

Conditions are making the sales.

The government advocates trucks for short hauls to relieve the railroads.

Business men are buying trucks as never before.

Every line of business is speeding up.

And the concerted effort of the automobile fraternity is getting behind the motor truck to put it across next year in a great big way, because it is conceded that the time is ripe.

Chicago Show Exhibit—Auditorium Hotel

Fulton Motor Truck Company
Farmingdale—Long Island—New York

Distributors in Savannah, Norfolk, Louisville, Indianapolis, Chicago, Milwaukee, Omaha, Kansas City, Dallas, El Paso, Spokane, Montreal and Quebec.

Lexington Raises Minute Man Prices.

The Lexington-Howard Motor Co., of Connersville, Ind., has increased the prices on two models of the Minute Man "O" series. The Clubster model now sells at \$1,385, instead of \$1,345; and the coupe model, at \$1,545, instead of \$1,510. The series R models remain at the former prices. The five-passenger touring car, with two auxiliary seats, and the four-passenger Spor-Tour, still sell at \$1,585, and the five-passenger convertible sedan at \$1,785.

* * *

Federal Production to be Increased.

The Federal Motor Truck Co., Detroit, Mich., will increase the production of Federal trucks as soon as the latest addition to the plant is completed. The new building is constructed of brick and steel and is being rushed to meet immediate needs, while other buildings are planned for the enlarged facilities that will be needed in the future.

* * *

Russel Axle Sales Double.

The Russel Motor Axle Co., Detroit, enjoyed a volume of sales during the past year that were slightly more than double those during 1916. A still further increase of about 50 per cent has been provided for by additions to the factory and the machinery equipment costing over \$150,000. The officers for the coming year are: A. W. Russel, president and general manager; W. S. Russel, vice-president; and George B. Russel, secretary and treasurer.

* * *

Takes Over Saxon Export.

Saxon cars for the export trade will be handled by the American Motors, Inc., of New York City. Instead of operating under its own name the American Motors, Inc., will be known as the Saxon Motor Car Corp., Export Department. J. J. Cavanaugh, formerly assistant export manager at the Saxon, will handle the factory detail of the export business. At the same time that the American Motors, Inc., took over the export end of the Saxon, it sold to the Saxon company a license to use the Carmm convertible body, the first to be granted.

* * *

Sills Made Scripps-Booth Director.

W. C. Sills, treasurer and general sales manager of the Chevrolet Motor Co., has been elected a director of the Scripps-Booth Corp. The appointment is considered a closing incident in the recent taking over of the Scripps-Booth Corp. by the General Motors group of automobile companies.

* * *

1414 Goodrich Men Enlist.

Enlistments have been recorded with great rapidity at the plant of The B. F. Goodrich Rubber Co., in Akron, O. To date 1,624 men have gone from various departments and every day brings an increase. Recently The Goodrich Co. hoisted a service flag containing 1,414 stars, but has had to tear it twice to affix new stars.

Cassidy to Handle Rajah Sales.

The Edward A. Cassidy Co., of New York City, has taken over the sales distribution of Rajah spark plugs, manufactured by the Rajah Auto Supply Co., of Bloomfield, N. J. In addition to the Rajah spark plugs the Cassidy Co. has become well known as sales agent for Corning conaphores, manufactured by the Corning Glass Works; the Cassco engine-driven tire pump, West Side Foundry Co.; Kimball Jack, F. W. Mann Co.; Tenion Piston Rings, Dubois Piston Ring Co.; and G. P. muffler cut-out and Long Horn, G. Piel Co.

* * *

Combined Motors is Organized.

The Combined Motors Corp., of Chicago, Ill., has completed its work of organization and now includes the Bour-Davis Motor Car Co., manufacturers of the Bour-Davis car, and the Shadwyck Brothers Co., makers of the Shadwyck Six car. The combination was originally planned to include also the Dixie Motor Car Co., of Louisville, Ky., manufacturer of Dixie Flyer cars, and the Collins Body Co., of St. Louis, Mo.

* * *

Paige Will Make Trucks.

The Paige Motor Car Co., of Detroit, will branch out into the manufacture of motor trucks. Part of the Williams Pickle factory has been taken over and it is planned to begin immediately the production of 2-ton trucks, which, however, will not be placed on the market for some time.

* * *

Cadillac Increases Closed Car Per Cent

The Cadillac Motor Co., of Detroit, has maintained its passenger car output at the full factory capacity. About 40 per cent of the total number of Cadillac cars produced at the present time are enclosed cars and the number shipped for the past year so far has been much greater than that during 1916.

* * *

Harry Ford Resigns From Saxon.

Harry W. Ford has relinquished active control of the Saxon Motor Car Corp., of Detroit, as a result of poor health. He will continue as a director of the company. It is not yet known who will succeed him as president, but general management of the company has been in the hands of Charles A. Woodruff, former purchasing agent for the Chalmers Motor Corp.

* * *

Standard Four Makes Big Expansion.

The Standard Four Tire Co., Keokuk, Ia., will have its capital expanded to \$4,150,000 and will erect a large and modern tire factory, in accordance with the decision arrived at in a recent stockholders' meeting. Preferred stock will be increased from \$500,000 to \$3,500,000 and the common stock from \$150,000 to \$650,000. At the meeting the company set aside the 8 per cent interest on the preferred stock for the past year to be paid in December and declared a 20 per cent dividend on common stock out of the net earnings of the past year.

Edmunds & Jones Conserve Cash.

The Edmunds & Jones Corp., of Detroit, has declared a dividend of 25 cents a share on its common stock, payable Jan. 1 on stock of record Dec. 20. The company previously paid \$1 a share, but this has been reduced in order to further strengthen its cash resources. The regular quarterly dividend of 1 1/4 per cent on preferred stock has also been declared. Net earnings of the company are maintaining a large increase, with a total for ten months of the past year running at the rate of \$600,000 a year.

* * *

Fisher Body Surplus Grows.

The Fisher Body Corp., of Detroit, had a surplus of \$993,561 for the quarter ending Oct. 31. This represented an increase of \$246,211 over the surplus of \$747,350 for the quarter ending July 31. The total income of the company to Oct. 31 was \$1,033,814, compared with \$776,205 at the end of July.

* * *

Templar Already Adding to Plant.

The Templar Motors Corp., of Cleveland, O., has outgrown its original quarters within its first year of existence. The company was founded a little more than a year ago, but it had hardly become settled in its factory than additions to the plant became imperative. A new building, with dimensions of 64 by 300 feet, is now being erected adjacent to the main plant.

* * *

Toback Manager Redden Truck Co.

S. S. Toback, long known in the East, especially in New York city, for his ability as a merchandiser of automobiles, having been particularly successful with the Hudson, has been appointed general manager of the Redden Motor Truck Co., Detroit.

* * *

Holley Bros. Form Separate Company.

The Holley Brothers have organized a separate company to manufacture carburetors handling kerosene as a fuel, following the development of their kerosene device. The new company is titled the Holley Kerosene Carburetor Co., capitalized at \$100,000 and located in Detroit. George M. Holley, Earl Holley and M. A. Cryderman are the incorporators.

* * *

Trains Service Manager Three Years.

The Detroit Weatherproof Body Co., or Pontiac, Mich., has taken an experienced service manager from another field, put him through a three years' course in its factory and has finally promoted him to the position of general service manager. The new service manager is C. J. Cunningham, who knows the facilities of the Detroit Weatherproof Body Co. probably better than any other one man.

* * *

Hupp Dividend on Preferred.

The Hupp Motor Car Corp., of Detroit, has declared its regular quarterly dividend on the company's 7 per cent cumulative preferred stock. The dividend is payable Jan. 2 to stockholders of record Dec. 20.



STA-TITE Piston Rings

Play an Important Part in the Success of America's Leading Automobiles, Motor Trucks and Tractors.

Every automobile engineer will tell you that the Life, Power, Speed, Hill Climbing Ability and Operating Cost of a gasoline driven vehicle depends on its motor.

The strength and power of any motor depends largely on its compression. Perfect Compression means an efficient, clean, smooth running motor.

A motor without Perfect Compression is troubled with improper lubrication, lack of power, and an accumulation of carbon.

STA-TITE RINGS give Perfect Compression and overcome these troubles—besides saving on oil, gasoline and repair bills.

STA-TITE RINGS insure proper lubrication and prevent pistons from wearing dry and scoring cylinder.

STA-TITE RINGS are guaranteed to be leak proof.

Dealers You should sell STA-TITE RINGS. The three piece construction, as shown in illustration above, assures equal distribution of pressure on cylinder walls.

Remember—STA-TITE RINGS are manufactured by the *largest manufacturers of piston rings in the world.*

Send NOW—TO-DAY for "TWELVE REASONS" why STA-TITE RINGS will prove to be business builders.

THE *Piston* RING COMPANY
SPECIALISTS IN PISTON RINGS

104 Sanford St.

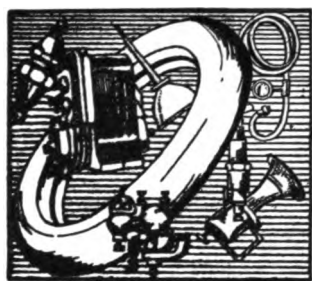
Muskegon, Mich.

Makers Also of "Quality" Snap Rings

*** STA-TITE ***
PISTON * RINGS

Mention "Motor West," Please, When Writing to the Advertiser

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HEINZE-SPRINGFIELD CRANKING-LIGHTING SYSTEM FOR FORDS.

Starting troubles attendant on the use of low-grade fuel have tended to place the starting and lighting system for Ford cars in the necessity class. The announcement of the John O. Heinze Co., Springfield, Ohio, of its new "Type 33" electric cranking and lighting system for Ford cars is therefore decidedly interesting to the tens of thousands of Ford owners on the Pacific Coast.

In this new Heinze device the mounting plate replaces the original timing gear cover of the Ford engine. By bolting securely to the machined surfaces of the Ford engine, a rigid and accurate mounting is secured for the motor-generator set, the entire system thus becoming really part of the Ford car.

While the cranking motor is independent of and separate from the lighting generator, both are mounted on a unit head, thus guaranteeing that both the motor and generator shafts are parallel one with the other, and that the distance between them is accurate and fixed. The proper engagement and operation of the automatic Bendix gear on the shaft of the cranking motor with the large gear on the generator shaft is in this way assured.

A silent chain of liberal dimensions and ample strength completes the drive from the generator shaft to the Ford crankshaft, and chain breakage is reduced to a minimum because of the accurate "lining up" of the chain as well as the shock absorbing feature of the Bendix drive. The chain must "line up" because of the built-in feature of the mounting plate.

The H-S switch not only controls the cranking and lighting features, but the Ford ignition as well, placing the control of the entire electrical apparatus of the car at the finger tips of the operator. The lever when turned to any of the "ignition on" positions connects the battery to the generator and allows the generator to act as a motor sufficiently to take up all slack

in the chain. In this way "chain whip" is eliminated and breakage prevented. As soon as the engine is started the generator voltage "builds up" and overcomes the battery voltage, thus recharging the battery and replacing the electricity consumed in cranking and for lights.

The switch lever likewise controls the lighting circuit, and permits of either dim or bright lights while the car is running. When parking, the car may be left with either "lights dim" or "off" as desired. In either of these last two positions the switch may be locked and the key removed. Not only is the switch lever locked, but the starting button as well, thus preventing tampering, and the running down of the battery due to cranking the engine without closing the ignition circuit.

The dash arrangement of the HS switch, a cowl light and an ammeter are shown in the illustration. These, as well as an electric tail light, are supplied without extra charge with every system. The features considered along with the dimmer and lock provided on the switch makes the system complete in every detail, even to an all-metal choking device to assure quick and easy starting. A most efficient organization and quantity production make possible the sale of this equipment complete in every detail for \$85 f.o.b. Springfield, Ohio.

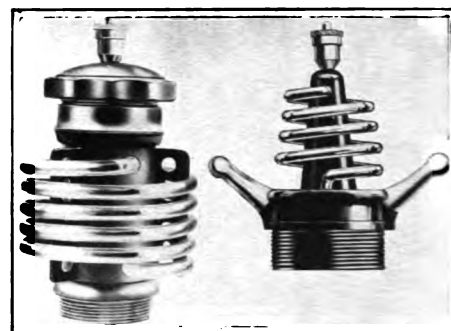
AMERICAN FOLDING CAMP STOVE.

The American Folding Camp Stove is made ready to be lighted by simply removing the cover and placing the tank in position. Meals may be made ready in less time than it ordinarily takes to gather fire wood and start a fire, eliminating fuel worry, flying sparks, dirt and delay. The American Camp Stove, when folded up, is enclosed in a steel case which is fitted with a handle, and is only 14½x8 inches. It weighs only 8 pounds and is an ideal stove for picnic and camping parties. It is manufactured by the American Gas Machine Co., Albert Lea, Minn., and New York City.

New Things in the Accessories Field

BURKE CONDENSER USES OLD "MOON-SHINE" PRINCIPLE.

The Burke Condenser acts as an anti-freeze device simply by preventing the escape of the vaporized alcohol which forms an important part in the anti-freeze mixture for the automobile engine. Water boils at 212 degrees Fahrenheit, alcohol boils at 173 degrees, therefore it is easily understood why many winter-driving motorists, who have filled their radiators with a mixture of alcohol and

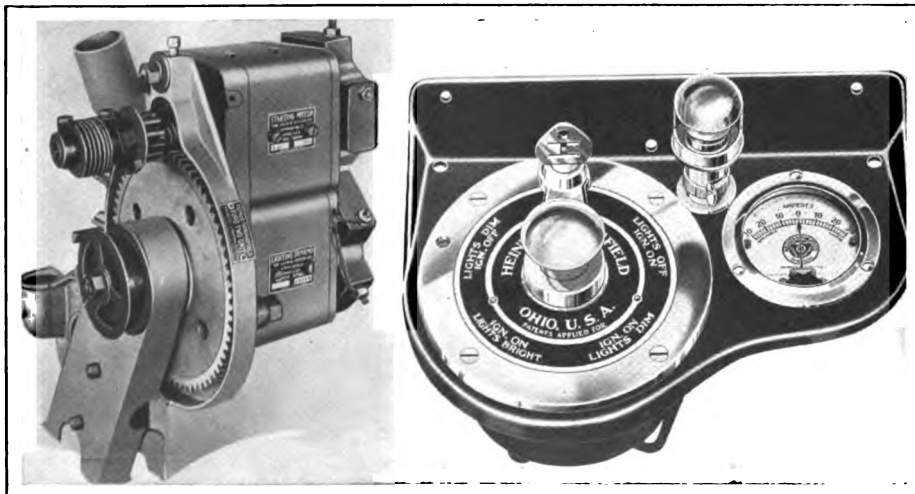


TWO TYPES OF BURKE CONDENSER.

water, discover too late that the alcohol has entirely evaporated. In the Burke Condenser after the alcohol has boiled and risen in a vapor it enters a shell, the lower end of which is screwed into the radiator in place of the radiator cap. A small-sized coil or "worm" for condensing the vapors, which then return to the engine, is connected to the top and bottom of the shell. This "worm" is a skillful adaptation from the coil used in the old "moon-shine still," and which formerly was a great aid in breaking the law, but which is now being put to a real beneficial use to motorists and motor car engines. The double-acting relief valve is mounted on top of the shell to govern the pressure in the radiator. The Burke Condenser is manufactured by the Automobile Devices Co., 1619-21 Sansom St., Philadelphia, Pa.

GILSON FIRESTONE CARBURETOR.

The Gilson Firestone Carburetor makes it possible to burn kerosene, "tops" or gasoline without readjusting or making any change when installing the new carburetor. The makers, the Gilson Firestone Carburetor Co., of 1806 Michigan Ave., Chicago, Ill., guarantees a saving of 50 per cent in fuel. The engine is started in the usual way by pulling the choke to insure easy starting. The fire chamber and the fuel tube produce a perfect dry gas from low grade fuel which enters the combustion chamber in a dry and explosive form, which because it is dry explodes with greater power and force and produces no fouling of spark plugs and depositing of carbon, such as is the case with a wet mixture. The Gilson Firestone Carburetor requires but one hour to install.



HEINZE SPRINGFIELD STARTING-LIGHTING SYSTEM FOR FORD CARS, SHOWING DASH EQUIPMENT.

A DrideK LEATHER TOP WILL NOT SCRATCH OR CHAFE
WILL HOLD ITS COLOR AND APPEARANCE
AND IS GUARANTEED ABSOLUTELY WATERPROOF



The Most Remarkable Top Material Yet Produced

When you put a **DrideK** leather top on your car, you cover it with a character and distinction that produces an increased value, and puts your car in the class where it belongs.

DrideK tops are being put on many of the *best* cars. If you don't know all about **DrideK**—get samples and prices at once.

L. J. MUTTY COMPANY
BOSTON, MASS.

SCOVEL IRON STORE COMPANY, *Pacific Coast Agents*
SAN FRANCISCO and LOS ANGELES, CAL.

DELTA 1000-FOOT SPOTLIGHT ANNOUNCED.

The automobile spotlight which will throw a 1000-foot beam of light straight ahead, and with an instantaneous outside focusing arrangement, which allows lighting up a 50- or 60-foot street, is announced by the Delta Electric Co., Marion, Ind.

This unique spotlight, with its focusing arrangement makes it possible while driving at any speed and by merely pulling towards the driver a small switch within the handle of the device, to spread the light instantly from a small spot to a width of 50 or 60 feet. By pushing in this switch the light is again formed into a spot.

It is adjusted so as to fit slanting windshields, or any other windshields, and the lamp is always in an upright condition. The front bulb and glass are instantly removable, and the universal windshield connection has a vise grip that fits any car. Light is furnished by a 22 candle power nitrogen bulb.

So flexible is this new spotlight that it is possible to direct the light straight back with the greatest ease while driving. Light can be thrown in any direction, whether for spotting house numbers, or for backing the car, and by means of an ingenious two-point suspension system for the body of the light, it is made to stay in any position until changed by the driver.

FORD REAR BUMPER AND TIRE HOLDER ATTACHMENT.

A new combination rear bumper and tire holder attachment has just been introduced by the Auto Parts Mfg. Co., Milwaukee, Wis., which fits all types of Ford cars—touring, sedan, coupe and roadster—thus eliminating the necessity of a dealer carrying any more than one style to take care of these types.

The manufacturers have introduced a new method of attachment which is very simple, as there is no machine work of any kind required, and anyone can attach it in a few moments. The arms are thickly ribbed at the proper points and the bumper when attached is exceedingly attractive and will withstand a very severe jolt or collision.

The tire holder used in connection with this bumper is also very attractive and has been constructed with the idea of carrying in a rigid substantial manner, either one or two tires (including either size), one or two demountables or wire wheels. The tire equipment carried is held rigidly in position by means of four supporting lugs and four straps which are fur-



(LEFT) AUTOREELITE MAKES TIRE CHANGING AND REPAIRS AS EASY BY NIGHT AS BY DAY.

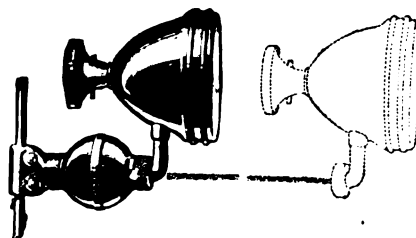
nished with the Tire Holder. Between the two side supporting arms is attached a substantial piece of strip steel which is suitably arranged for carrying the license bracket. The two supporting arms are bolted to the bumper arms by means of four bolts and when not in use can be easily and quickly removed.

SCHEBLER PLAIN TUBE CARBURETOR, MODEL "FORD A."

The new Schebler Plain Tube Carburetor, Model "Ford A," is a non-moving part designed especially for Ford cars. The Pitot tube principle is introduced for the first time in this carburetor and is so designed and built that it automatically furnishes a rich mixture for acceleration and thins out this mixture after the normal motor speed has been reached. A flexible, powerful and economical mixture is furnished without the addition of any complicated moving parts. Two gasoline needle adjustments are furnished—one for low speed and idling and one for high speed, which properly handle the heavy grades of fuel in use at the present day. A double choker enables the car to be started under the severest weather conditions. With this carburetor a low speed of from 4 to 5 miles per hour may be secured without any loading or missing. Price of the Model A Ford outfit complete, \$17. Manufactured by the Wheeler-Schebler Carburetor Co., Indianapolis. Distributed in San Francisco, Oakland and Spokane by Weinstock-Nichols, and in Portland and Seattle by Ballou & Wright.

AUTOREELITE IS MORE THAN A SPOT-LIGHT.

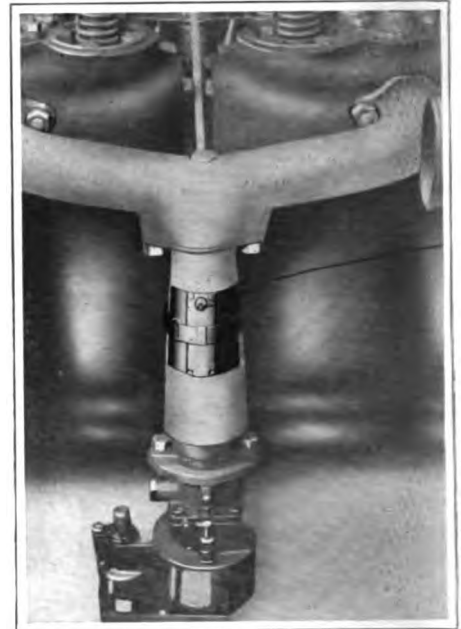
The Autoreelite can be made to act either as a dirigible searchlight or an automatic extension inspection light, thus justifying the makers in terming it something more than just a spotlight. The automatic extension trouble-light of the Autoreelite robs touring of one of its most disagreeable features—the fear of a breakdown on the road after dark. The Autoreelite provides a lamp of superior construction in combination with the Anderson automatic cord reel carrying 12 feet of extension cord, allowing the lamp to be moved for inspecting any part of the car. A model A Autoreelite, of the hollow bracket type, sells at \$7.50 and \$8, the latter price including a mirror for rear view. The model B Autoreelite, the 1918 model, brings the lamp nearer the driver and provides an extremely rigid construction. Retail prices are \$7.50 and \$8, the latter price including rear view mirror. The Autoreelite is fitted with a Star-Lancaster non-glare lens, which is warranted by the manufacturer to comply with the non-glare laws of every state which has enacted such legislation. It is manufactured by the Anderson Electric Specialty Co., Chicago, Ill.



(ABOVE) MODEL A AUTOREELITE HOLLOW BRACKET TYPE, SHOWING METHOD OF EXTENSION BY MEANS OF 12-FOOT AUTOMATIC CORD REEL.

STARTING WITH A COLD MOTOR MADE EASY.

Winter weather used to take the joy out of motoring. Starting difficulties were daily encountered, and if the weather was unusually cold it was often necessary to keep the engine running constantly. But the Electric Intake Heater, a little patented device, is now to be had which produces a hot spot on the intake pipe between carburetor and motor, thus doing



ELECTRIC INTAKE HEATER IN PLACE.

away with all starting troubles. A neat switch on the instrument board applies or cuts out the current from the battery to the heater. This intake heater draws but 2 or 3 more amperes than the lights do from the battery, while the starter draws from 60 to 70.

To keep churning a starter trying to get a motor to pick-up the stroke under its own power is hard on the battery, the starter and the motor—and it wastes gasoline.

If gasoline would vaporize quickly in the cold there would be no difficulty whatever. The Electric Intake Heater heats the intake pipe through and through from the outer surface of the pipe. The air inside is heated to a degree that when the gasoline flows past this hot spot it immediately vaporizes and charges the cylinders with a fireable mixture. Halliwell Bros., of Los Angeles, are Western distributors of this device, which is manufactured by the Electric Intake Heater Co. of Jackson, Mich.

PROTECTING THE CAR AGAINST THEFT.

Revision of the present insurance rates against the theft of automobiles, which is to become effective next January, is directly due to the negligence of owners in failing to protect their cars with patented locking devices, coupled with the lax methods of the police in many large cities.

During the first eight months of 1917, more than 10,000 cars were stolen in eight cities—New York, Chicago, Philadelphia, Detroit, Cleveland, Toledo, Columbus and Buffalo—of which the police recovered about 6,000.

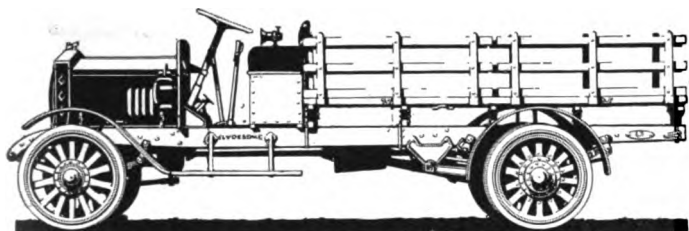
For many months "Motor West" has urged the absolute necessity of protecting motor cars against theft by the use

CLYDESDALE



**Motor Trucks of $\frac{3}{4}$ Ton
to 5 Ton Capacity**

THE CLYDE CARS CO., Clyde, Ohio



Investment vs. Expense

A cheap porcelain plug is a double expense. **FIRST:** It needs frequent renewals on account of breakage and sooting. **SECOND:** It's a waster of gas and money.

HERZ PLUG

"Bougie Mercedes"

once properly installed ask only one favor of you, viz.: to leave them alone.

They last as long as your pistons and crank shaft—a real investment.

They insure perfect and vigorous combustion of all the gas. Let us educate you up to Herz Plugs. They're \$1.50 at your dealer's, or



\$1.50

at your dealer's

or

HERZ & CO.

245 W. 55th St., New York

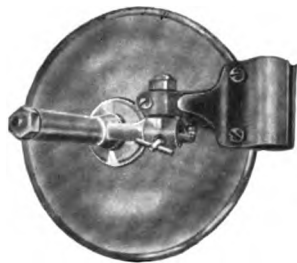
...THE...

Williams Spotlight

TWO SIZES (6 AND 7 INCHES)

Model A, \$9.00

Model B, \$10.00



Rear View of Williams Spotlight

Has adjustable control to comply with requirements of the lighting laws of all States. May be used for either left or right side of windshield.

Detachable for Trouble Lamp or for lighting camp at night. Has inclosed dust-proof and water-proof switch.

We sell through jobbers only, and are represented on the Pacific Slope by

HUGHSON & MERTON, Inc.

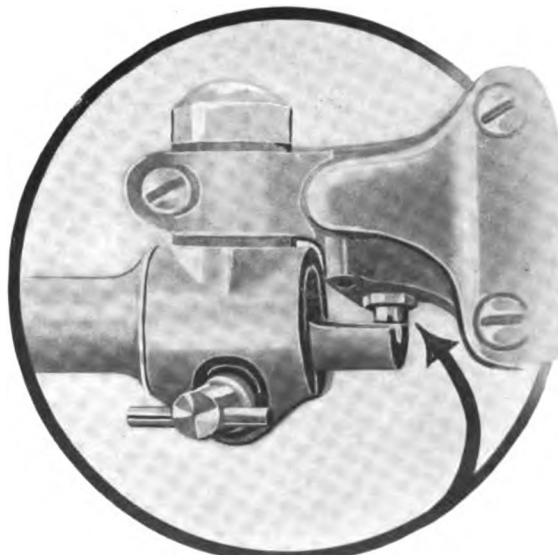
Los Angeles, San Francisco, Portland and Seattle

MANUFACTURED BY

WILLIAMS MFG. CO.

310 North Flower Street

SANTA ANA, CAL.



Detail of Adjustable Control Feature of Williams Spotlight

How Often Must You Clean Your Plugs? Ford—Overland—Studebaker Owners

The new *AC Carbon Proof Plug* will permanently rid you of plug trouble and keep your motor running on *all* cylinders *all* the time.



AC Carbon Proof
The Plug for Ford
and Studebaker

The Reason

A deposit of carbon on the smooth surface of the porcelain in what causes short circuit with ordinary plugs. With the AC Carbon Proof plug the porcelain is provided with a number of ribs having saw tooth edges which attain a sufficiently high degree of heat to burn away the carbon. This keeps the edges free from deposits and breaks up any possible short circuit.

AC SPARK PLUGS

The Standard Spark Plug of America

Champion Ignition Company
Sole Manufacturers Flint, Michigan



THE STANDARD SPARK PLUG

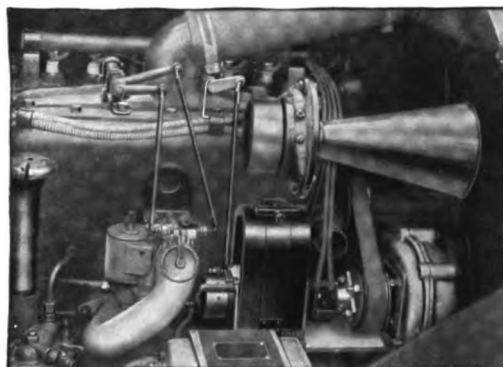


HOTEL ST. FRANCIS San Francisco

Center of the City's Life and Color

EUROPEAN PLAN FROM \$2.00

Management - James Woods



A Standard Bosch Installation on the Hupmobile

CONSERVATION

Get the full output of your engine, develop its maximum power and don't contribute to the waste of gasoline. Avoid inefficient, weak ignition systems which cause waste; we now supply magneto attachments for most battery equipped cars.

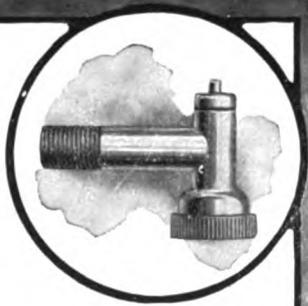
Send for "More Efficiency"

Bosch Magneto Co., New York

Coast Branch: 1324 Van Ness Avenue, San Francisco

Coast Distributors: E. A. Featherstone, Los Angeles
Ballou & Wright, Portland and Seattle
Kimball-Upson Co., Sacramento

YOU CAN'T TELL
HOW MUCH BENGAL
TIGER THERE IS IN
A WHITE RABBIT
UNTIL YOU PUT HIM
ON A MEAT DIET.



—and you can't tell how many miles your tires can give until you put them on a **REGULATED, MEASURED** air diet.

Just so many pounds pressure, no more and no less.

If you pumped up your tires every time they fell below the pressure specified by the tire-maker, they would last for the maximum distance.

Don't say pumping is too much trouble. With a

SCHRADER UNIVERSAL PUMP CONNECTION it is no trouble at all.

Ask your dealer to show you how it works.

Price Thirty-five cents.

A. SCHRADER'S SONS, Inc.

783-803 Atlantic Ave.,
Brooklyn New York



PISTON SERVICE



Light Weight, Any Make

Cast Iron Pistons

Are the **BEST** by TEST

FINISHED

SEMI-FINISHED

or **ROUGH**

LARGEST PRODUCERS IN THE WEST

W. H. JAHNS AUTO MACHINE WORKS

908-912 West Pico St.

Los Angeles, Cal.

"A-1 Quality"

Ford

—Universal Auto Co., Spokane—"Have been using Zerolene for several months; A-1 quality."

Buick

—J. D. Lauppe, Sacramento—"We have found Zerolene to be a satisfactory lubricant for Buick automobiles."

Dodge

—Eaton & Campbell, Seattle—"Our experience with Zerolene has been entirely satisfactory."

Mercer

—Mercer Pacific Coast Agency, San Francisco—"Zerolene has proven very satisfactory."

ZEROLENE

The Standard Oil for Motor Cars

Endorsed by Leading Car Distributors.

—because the records of their service departments show that Zerolene, correctly refined from California asphalt-base crude, gives perfect lubrication—less wear, more power, least carbon deposit.

Dealers everywhere and at our service stations.

Standard Oil Company
(California)



Oakland, Cal.—The Pacific KisselKar Branch here has opened a used car department in its building on the upper Broadway automobile row; it has been put in charge of Guy C. Jacobs.—The Record Tire Co. has occupied new quarters on the upper Broadway automobile row.—Lewis Beatley, manager of the Original Double Tire Tread Co., has bought the Service Tire & Vulcanizing Co. at 1762 Broadway and will open business there under the name of the Oakland Rubber Works.—The Osen-Hunter Co. has become dealer for the Hupmobile car.

* * *

San Bernardino, Cal.—The agency for Braender Bulldog tires in this city, Redlands and Riverside has been taken by Koon & Lorentzen of the Tire Construction Co.

* * *

Safford, Ariz.—S. B. Echols, has consolidated his business, the Auto Service Station, with that of the Ford Sales Co. here.

* * *

Williams, Cal.—A. B. Levey has taken the Hupmobile agency.

* * *

Richmond, Cal.—F. H. Reed has purchased the Hilliard Automobile Co. and will run it as the local Buick agency.

* * *

Irvington, Cal.—J. F. Chadburne has secured the Hupmobile agency.

* * *

Downey, Cal.—A. L. Nichols has bought the Downey Garage.

* * *

Fresno, Cal.—B. M. Peacock has become Hupmobile dealer.

* * *

Stockton, Cal.—Pengilly & Clarke, Chalmers car and White truck dealers, have added the agency for the Dort car.—A. E. Hunter has become dealer for the Hupmobile car.

* * *

El Centro, Cal.—H. F. O'Byrne has taken the Maxwell agency.

* * *

Tulare, Cal.—The Central Garage will handle the Hupmobile line.

* * *

Visalia, Cal.—Roy Bisconer has become Hupmobile agent.

* * *

Tucson, Ariz.—The Babbitt-Polson Co. has taken the Cadillac agency for the state, following its release by Robert Byrns, who held it for about a year.

"Exide" Batteries

DISTRIBUTORS

We Repair all makes of Batteries, Generators, Coils, Magnetos and Starters

PROMPT ATTENTION GIVEN TO COUNTRY TRADE

Harry W. Harrison

F-5971 831 LOS ANGELES ST. Main 6582

Elgin Six

"The Car of the Hour"

Big, Beautiful, Impressive, Powerful, Dependable,
Economical

"Built Like a Watch"

4-Passenger Roadster **\$1095**
5-Passenger Touring Car

Subject to Change Without Notice
Write for descriptive catalogues

Elgin Motor Car Corporation CHICAGO
U. S. A.

ADAMSON

VULCANIZERS

are an economical way of practicing an economy — they use convenient gasoline; no special fuel or expensive electricity is required. They are safe — the heat is automatically regulated.

DEALERS: Order from your jobber today. If he can't supply you, send us his name.

ADAMSON MANUFACTURING CO., East Palestine, Ohio

PHILADELPHIA DIAMOND GRID BATTERY

The Best of Batteries

There may still be an opportunity to obtain selling rights in your territory if you act quickly.

Philadelphia Storage Battery Co.

BRANCHES:

1105-7-9 W. Pico St., Los Angeles, Cal.
37 Spear St., San Francisco.



INTER-STATE

The best light car on the market today. Economical in every way, and tremendous Power. Once an Inter-State owner always an Inter-State owner.

WRIGHT MOTOR CAR CO.

1001 SOUTH HOPE ST.

A5772 Distributors California and Arizona Mals 627



NEW HOME

OF

Motor Car Equipment Repairs Company

Specialists on Radiator,
Fender and Body Repairing

LOCATED AT

1246-48 South Los Angeles Street

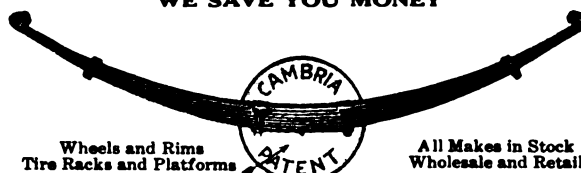
In Modern Fireproof Building

Main 7941

Home F 3700

Main 1076 **CAMBRIA SPRING CO.** F 5233

Incorporated
"WE SAVE YOU MONEY"



Wheels and Rims
Tire Racks and Platforms

All Makes in Stock
Wholesale and Retail

AUTO AND TRUCK SPRINGS

Demountable Rims Sold and Applied
Spring Steel Bumpers

SPRINGS REPAIRED, FORGINGS AND FRAMES STRAIGHTENED

Factory: 913-921 So. Santee St., Los Angeles, Cal.

Office: 916-918 So. Los Angeles Street

Save the Nation's Gasoline with the

SUNDERMAN \$6 Vacuum Carburetor

This price maintains on Ford and Metz models

Other cars \$8 and \$10, depending on fittings necessary

This perfect carburetor will save you, no matter what your car, from 30 to 50% in your gasoline consumption. At the same time it will give your motor power, speed and flexibility beyond your fondest hopes.

It's your duty to your country to save gasoline when you can. It's a dealer's duty to promote the sale of an instrument that will cheapen the cost of running a car.

Send in your orders now—Fall is a big carburetor season

SUNDERMAN CORPORATION

17 Chambers Street (Dept. C) NEWBURGH, N. Y.

Western Office: 403 Kresge Bldg., Detroit.



UNION OIL CO. OF CALIFORNIA

The Kelly-Springfield mileage guarantee marks the point where you stop riding on a ticket you've paid for and begin to ride on a pass.



Kelly-Springfield Tire Co.
Executive Offices
 Seventh Ave. at 57th St., New York.
General Sales Department
 1900 Euclid Ave., Cleveland, O.

Ogden, Utah—The Ogden Motor Car Co., capital \$50,000, has been incorporated by D. O. McKay, Joseph Read, L. L. Hanns, P. T. Rushmer and J. G. Read.—The Utah Tire & Repair Co., capital \$25,000, has been incorporated by Thomas B. Evans, Mary E. Smith and K. E. Smith.

* * *

San Jose, Cal.—H. P. Smith has been appointed Oldsmobile dealer here.

* * *

Sacramento, Cal.—F. C. Peters has taken the Oldsmobile agency.

* * *

Stockton, Cal.—The L. B. Murphy & Co. has become Oldsmobile distributor.

* * *

Fresno, Cal.—J. C. Phelan has taken the Oldsmobile line.

* * *

Modesto, Cal.—Sapp & Peterson will handle Oldsmobile cars here.

* * *

Chico, Cal.—The Todd Auto & Supply Co. has become Oldsmobile agent.

* * *

Marysville, Cal.—F. R. Johnson has taken the Oldsmobile agency.

* * *

Woodland, Cal.—The McBroom Motor Sales Co. has secured the Oldsmobile dealership.

* * *

Red Bluff, Cal.—Jud W. Boyd has been appointed Oldsmobile dealer.

* * *

Watsonville, Cal.—J. F. Jefson has been made Oldsmobile agent here.

* * *

Livermore, Cal.—F. H. Duarte will sell Oldsmobile cars in this locality.

* * *

Pomeroy, Wash.—McKeirnan Brothers Co. has closed a contract with the John Doran Co. to handle Packard and Hudson cars.

* * *

St. John, Wash.—James Jennings has taken the agency for the new Pan car in Whitman and Latah counties.

* * *

Walla Walla, Wash.—J. D. Moore will be dealer for Packard and Hudson cars.

* * *

Vancouver, Wash.—The Inter-state Vulcanizing Co. has been formed with a capital of \$6,000 by D. F. Smith and Austin B. McCoy, to deal in tires and accessories.

* * *

Seattle, Wash.—Cottle & Young have opened a repair shop at 1514 Broadway.

* * *

Burlington, Wash.—The Burlington Auto Co. has been incorporated for \$15,000 by C. A. Campbell, D. H. Shaw and Henry Rohweder.

OLYMPIAN

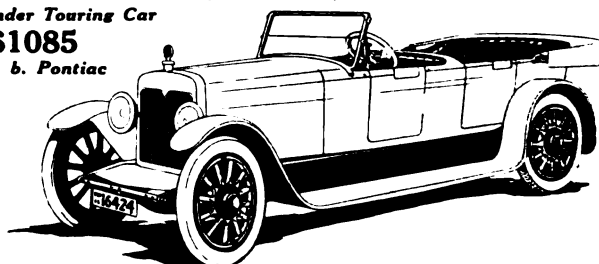
One Hundred Percent Car

Write for dealer proposition

4-Cylinder Touring Car

\$1085

f. o. b. Pontiac



OLYMPIAN MOTORS COMPANY, Pontiac, Mich.



This company has an attractive proposition to offer desirable distributors and dealers in Pacific Coast territory.

1½-ton Truck ..\$2100.00 3½-ton Truck ..\$3000.00
 2-ton Truck 2400.00 5-ton Truck 4200.00
 Light Tractor\$2500.00
 Heavy Duty Tractor 3800.00

ACASON MOTOR TRUCK COMPANY
 DETROIT

FORD CAR OWNERS USE KEROSENE

(Coal Oil)

One Mile on Kerosene Costs Less than ½ cent
 One Mile on Gasoline Costs From 1¼ to 1½ cents

BUY A DETROIT KEROSENE EQUIPMENT

Save 60% Price of Equipment \$25 f. o. b. Detroit

30 days Trial or MONEY BACK — ACT PROMPTLY!

These are days of strict economy

DETROIT KEROSENE CARBURETOR CO.
 KRESGE BLDG. DETROIT

Department 16

PHONE:
 Main 4062

PHONE:
 A-4062

AUTO AND TRUCK
 SPRINGS

WHEELS, BUMPERS
 FORGINGS

Wholesale

Retail

UNITED STATES SPRING CO., Inc.

Successors to A. & F. SPRING CO.,
 1120-22 South Los Angeles Street, LOS ANGELES.

A PEX

Motor Oils

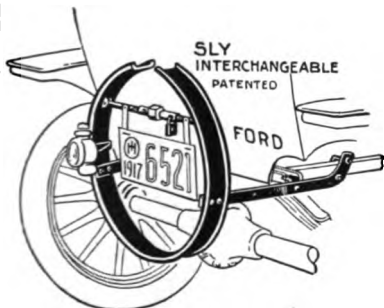
THE HIGHEST POINT OF EFFICIENCY

Gasoline "with the Punch"

PUENTE OIL CO.

Oldest Refiners and Producers on the Coast

BE UP-TO-DATE ON TIRE CARRIERS

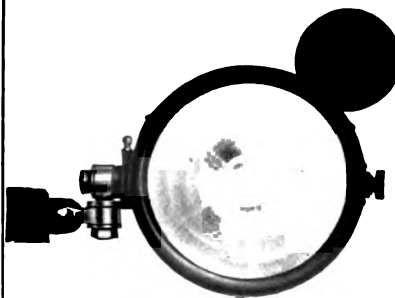


The strap kinds are obsolete and unsightly. The Sly interchangeable—Ford or Chevrolet quickly—neatly does the trick—take any casing or demountable—cost no more. Beware of imitations. If your Jobber doesn't list, write us for complete catalogue—of real Carriers and "Better Springs."

NEW ERA SPRING & SPECIALTY CO.

1190 Hamilton Ave.,
 Grand Rapids, Mich.

"The Light That Shows the Road"



SAFETY FIRST—BUY AN S & M

Complies with the California State Law without interfering with its usefulness in reading house numbers, road signs, etc. For sale by all Jobbers and Dealers of Automobile Accessories.

25413

S & M LAMP CO. 117 West 36th Place
 LOS ANGELES

GRÜSS AIR SPRINGS

The Luxury Shock Absorber for Quality Cars at

CARTER & VANBERG'S

775 Towne Ave. Bdwy. 8306. LOS ANGELES.

RIVES AUTO PEDAL

Neverslip Pads \$1 per Set

INCLUSIVE

Cover the entire Field—Rubber Vulcanized through and locked securely to the metal.
 See. H. Rives Mfg. Co., Inc. 2187 Westworth Bldg., New York



MOTOR WEST

Reaches a larger percentage of dealers than any automobile publication circulated on the PACIFIC COAST.

PRESSED STEEL PARTS FOR AUTOMOBILES AND TRUCKS

ESTIMATES CHEERFULLY FURNISHED

The Bossert Corporation UTICA
 NEW YORK

BEST IN THE LONG RUN

FAIR TREATMENT

GOODRICH TEST CAR

A Message from America's Roads

Where You See This Sign Goodrich Tires are Stocked

GOODRICH TESTED TIRES

Ask Your Dealer for Them

SECURE certainty of service in Tested Tires. They give *sure* service because it is *proven* service. Their endurance and durability have been proved in the *one way* to assure mileage to the motorist, on the car on the road; every type of road."

Hearken to that 1918 message the roads of America send American motorists.

Last year Goodrich launched six Test Car Fleets in six widely different regions of our country. Month after month, light cars and heavy cars mauling Goodrich Tires from state to state, put them to every road test to try the mettle of—

GOODRICH

TESTED TIRES

What these tires endured doubled Goodrich's pride in its tires. **BLACK SAFETY TREAD** and **SILVERTOWN CORDS** stood staunch against the rough going without a flinch, till they excited the wonder of even the tire experts detailed with the fleets to watch the tests. They fought the teeth of America's roads and bear them.

The results of this sensational test — "America's Tested Tires," are at the fingertips of the American motorist in Goodrich Tires. Get the certain service of Tested Tires. Get their lasting wear, and avoid blowouts.

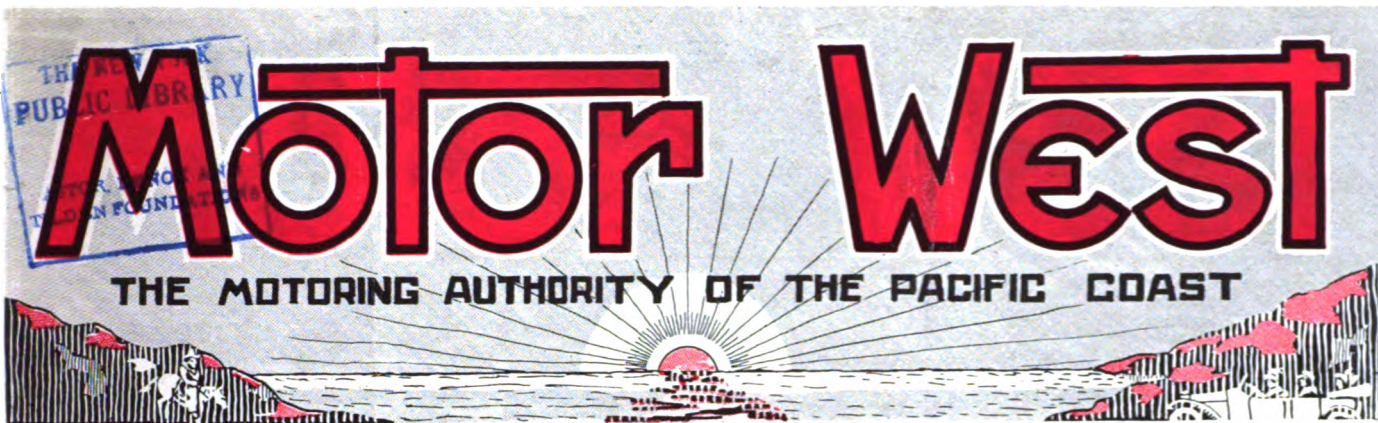
THE B. F. GOODRICH RUBBER COMPANY

Los Angeles Branch, 946 South Broadway

THE CITY OF GOODRICH · AKRON, OHIO.

Mention "Motor West," Please, When Writing to the Advertiser

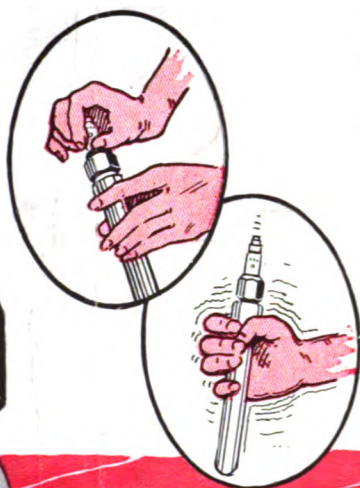
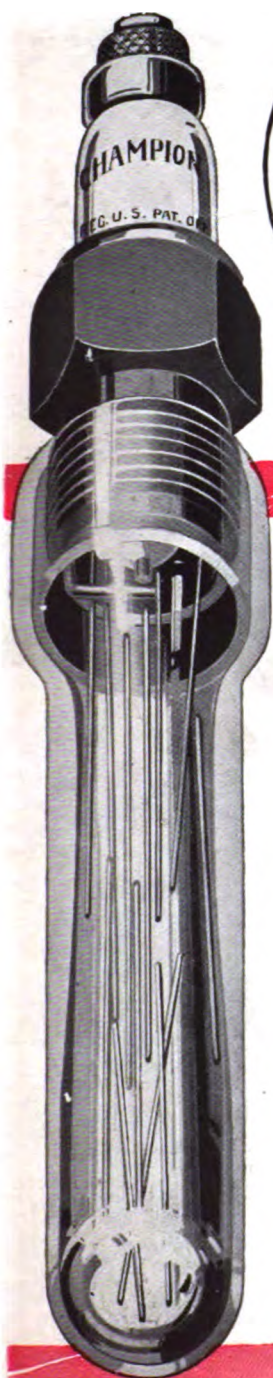
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VOL. XXVIII. No. 8

FEBRUARY 1, 1918

\$2.00 A YEAR, 10c A COPY



Champion

"Minute"
Spark Plug
Cleaner

Clean Plugs —and hands clean

WITHOUT taking the plug apart, in a fraction of the time it used to take to *half-clean* your spark plugs, you can now get them *really* clean without even soiling your hands.

Just half fill the tube of the cleaner with gasoline, screw the plug in the socket at the top and give it a vigorous shaking.

The gasoline softens the carbon and the little flying needles pick it off in small particles, leaving the plug cleaner than you could get it in the old laborious way.

Champion Minute Spark Plug Cleaners sell for only 75 cents, come in a neat wooden box that will pack neatly in one's tool case.

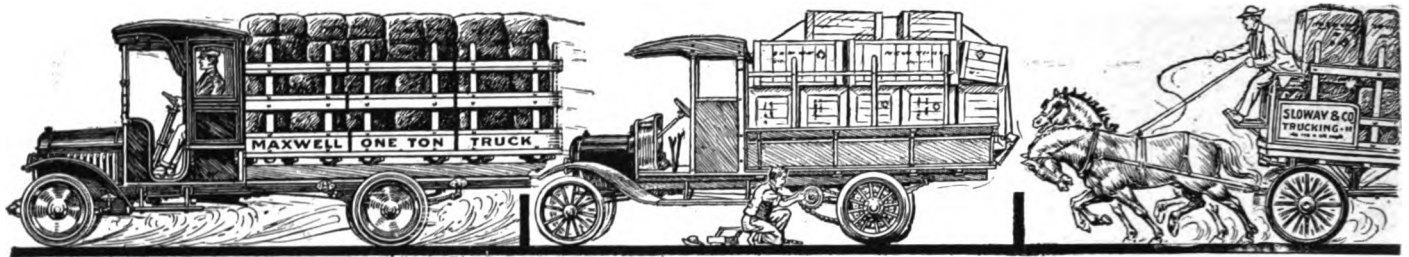
They are a ready-selling, money-making article for supply dealers and garage men everywhere.

Any jobber of automobile accessories will supply you.

Write for any information desired.

Champion Spark Plug Co., Toledo, Ohio

TOL
F



Speedy—Efficient—Economical

Makeshift—Unreliable—Costly

Slow—Uncertain—Costly

Reach Quick for This Sudden Flood of Truck Money

Don't stand there, waiting another week, and watching this big profit opportunity roll past you.

They must have trucks. They are all waking up to it at one time. The whole trend of up-to-the-minute transportation science is sending business towards the dealer who has Maxwell One-Ton, Worm-Drive Trucks.

The one-ton unit is now recognized as the key to the solution of the problem the country is facing. The traffic experts' standards of 1916 are not the standards of today.

Country—town—agricultural—mercantile—industrial—bus—express—long haul—short haul—few stops or straight run—steady volume or fluctuating volume of traffic—no matter what the work of your district is,

no matter how many different forms of traffic are being handled, the one-ton truck is the key to the problems that people in your district will have to cope with.

And of all the one-ton trucks the one that gives maximum service, at minimum cost, is the Maxwell Truck with the time-tried Maxwell engine and the same durable, reliable type of worm drive as in trucks costing \$5,000.

The Maxwell is pure truck design and truck construction in every detail—steels of automobile quality, but not a transformed automobile. It carries a ton and at the same time can haul three tons.

Write for our offer to dealers while these trucks of maximum efficiency are still procurable.

Maxwell Motor Sales Corporation
 Detroit, Michigan San Francisco, California

MAXWELL ONE-TON TRUCK

WORM-DRIVE

MOST MILES PER GALLON - MOST MILES ON TIRES

Mention "Motor West," Please, When Writing to the Advertiser

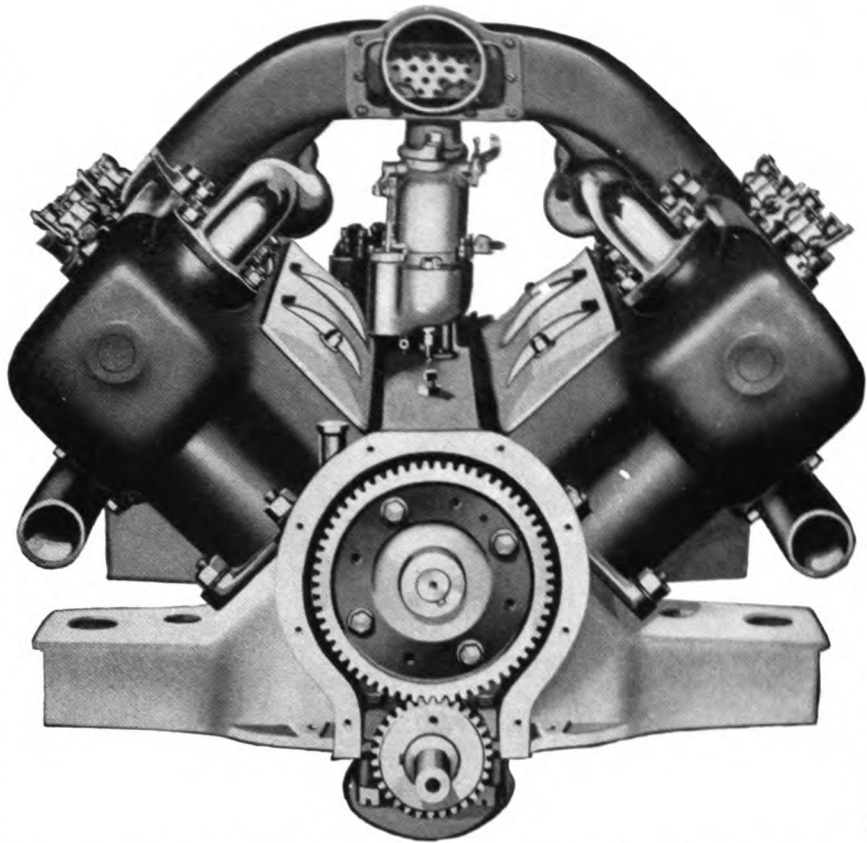
Over 80 Parts Eliminated

HERE is one illustration of Apperson skill. It demonstrates the value of buying not only a car, but *experience*. The 25 years spent in building motor cars taught the Apperson Brothers how to eliminate over eighty parts from the eight cylinder motor.

The Apperson Eight is the simplest of any now being built.

Only One Cam Shaft Only Two Cam Gears

These are practical reasons for the extreme simplicity and quietness of the Apperson Eight motor. The hollow crank shaft, positive feed lubrication system, and the enclosed, yet accessible valves are among other desirable features that clinch sales with well informed motorists and contribute to the 100% performance of this Eight.

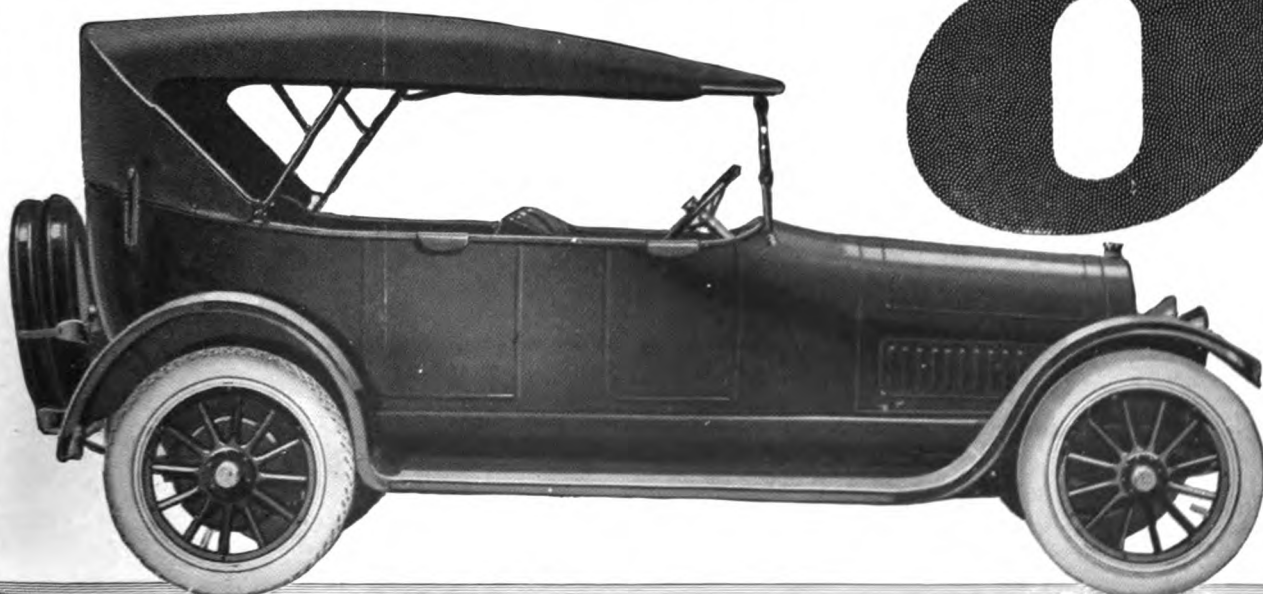


See the Apperson Eight motor—test it—watch its work on all kinds of roads and you'll decide that no other Eight can meet your needs as well as the Apperson.

Apperson motor cars are built in eights and sixes, touring cars and "Chummy" roadsters. Ask your dealer to explain—and demonstrate.

Apperson Brothers Automobile Company, Kokomo, Indiana

APPERSON





The County The Railroads Forgot -



Redding, Cal.,
Oct. 24, 1917.

WEAVERVILLE, the county seat of Trinity County, California, was formerly three and a half days distant by horse-drawn stage, from the nearest railroad. Today, Federals have brought this rugged, remote mountain county closer to the United States.

That is the real significance of the "Federalized" stage from Redding to Weaverville. It visualizes tangibly the great nationalizing influence of the Motor Truck.

The value of the sturdy, economical Federal, therefore, is not to be measured alone in terms of the profits you earn, the business you dispatch, the greater distance you cover. Its value must also be measured in terms of human advancement and national growth.

Write for Federal "Traffic News"

Federal Motor Truck Co., Detroit, Mich.

"When we purchased our first two Model 'M' Federals, to put on the Redding Weaverville run, the people in that community and the freighters on the road, knowing its condition, ridiculed the idea of using motor trucks on it. It is a fact that the roads did look impossible for motor trucks, as there are thirty percent grades, right angle turns, narrow places.

"We have the mail contracts between Redding, Shasta County, and Weaverville, Trinity County. The mail must go the year round, and no excuses are accepted. There is no railroad in Trinity County, and it is said that there are children there fifteen years of age that have never seen a wheeled vehicle. There are very few roads there, most of the transportation being over trails. Mail includes parcel post, and parcel post includes everything.

"It takes an eight horse team seven days to make the round trip from Redding to Weaverville, hauling five tons one way and it costs at least \$10.00 per day to feed the team, and \$4.00 a day for a driver, making a total of \$98.00 expenses for moving five tons the distance, which is fifty-two miles.

"With our five ton Model 'X' Federal, we make the round trip in eleven hours, and are loaded both ways. Our costs are \$10.00 for driver, \$5.00 for tires, twenty-five gallons of gasoline at \$0.20 or \$5.00 for gasoline, and five dollars for depreciation, making a total of \$25.00 for the trip.

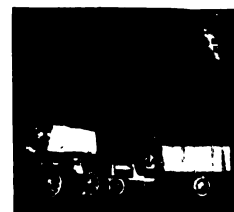
"We ran our trucks over this impossible road all last winter, and they never failed us."

Redding-Weaverville Stage Co.



FEDERAL

One to Five Ton Capacities



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Most Profit— Most Service

Most profit to the Dealer. Most Service to the user. Has more IMPROVED features, therefore the easiest Motor Truck to sell.

ARMLEDER

Motor Truck

2 Ton—WORM DRIVE—3½ Ton

Because of HILLS Cincinnati, Ohio, is called "The graveyard of trucks," yet more Armleder Motor Trucks are sold there than all other makes combined—proving EXTRA Strength and stability of the Armleder. NOTE THESE SMASHING NEW TALKING POINTS—New construction of Spring, Propeller Shaft, Radius Rods, Frame, Step Board Brackets, Wheels, and Lubrication System. Big proposition for few more western Dealers. Write or wire at once.

ARTHUR H. HERTZ

112 MARKET ST., DEPT C, SAN FRANCISCO,

In Charge of Western Sales
ARMLEDER MOTOR TRUCKS.

Manufactured by
THE O. ARMLEDER CO.
Cincinnati, O.



SECOND ANNUAL PACIFIC

AUTO SHOW

Exposition Auditorium
San Francisco

*"The World's Most
Beautiful Show"*

February 16 - 24

Inclusive

Complete showing of new models of passenger cars together with comprehensive exhibit of trucks, tractors and accessories

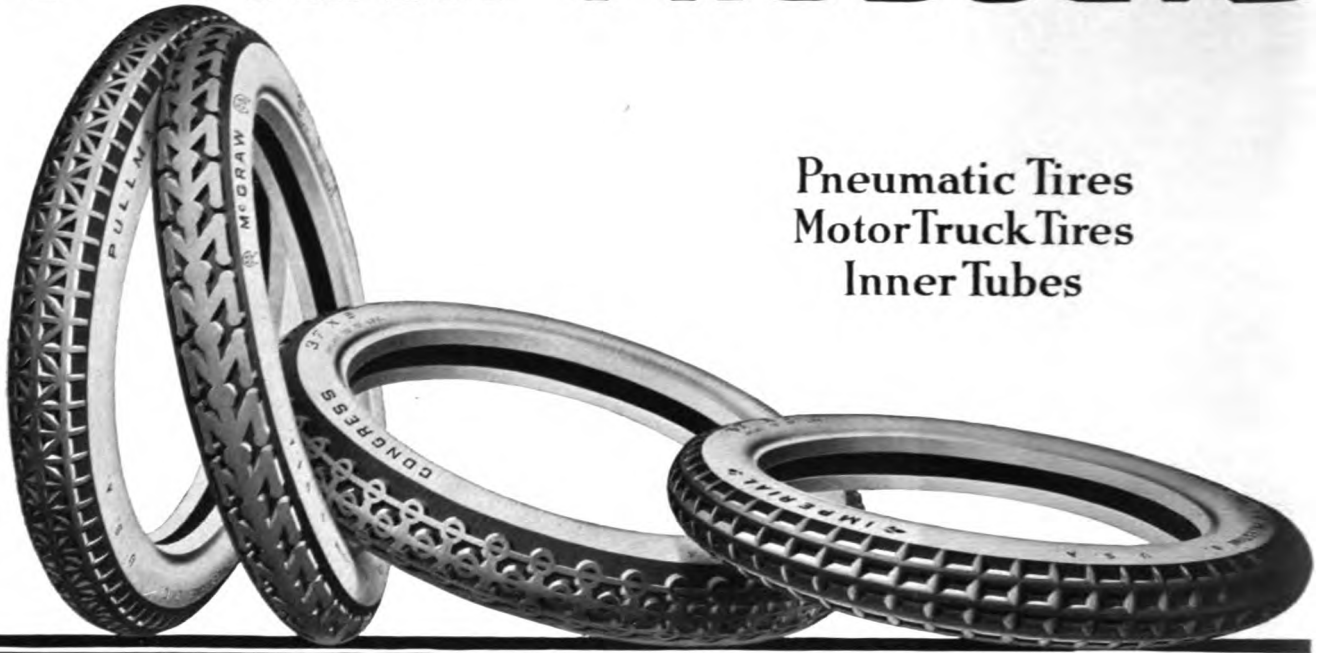
Reduced Rates on all Railroads

Under Auspices

SAN FRANCISCO MOTOR CAR
DEALERS' ASSOCIATION

G. A. WAHLGREEN, Manager

MCGRAW PRODUCTS



Pneumatic Tires
Motor Truck Tires
Inner Tubes



Coöperation

COÖPERATION with distributors has been a prime factor in the rapid and steady growth of the McGraw business.

In addition to an efficient field service, we maintain a merchandising department to assist dealers in making frequent turn-overs of their stocks and to enable them to develop a profitable, permanent tire business.

The McGraw system of district warehouses assures the dealer of quick delivery and efficient service from our jobbing distributors.

Let us tell you the details of our selling plan and methods of dealer coöperation and service.

THE MCGRAW TIRE & RUBBER CO.

East Palestine, Ohio

Distributing Warehouses , , New York , , Atlanta , , St. Louis , , San Francisco

Mention "Motor West," Please. When Writing to the Advertiser

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MOTOR West

THE MOTORING AUTHORITY OF THE PACIFIC COAST

VOL. XXVIII., No. 8

FEBRUARY 1, 1918

\$2.00 PER YEAR

AUSTRALIA TRADE VERY PROSPEROUS

**Despite Handicaps of Heavy Freight,
Duties and Insurance, Sales Are
Heavier Than Ever Before.**

Unprecedented prosperity is what Australia is now enjoying, according to C. H. Kloster, connected with Dalgety & Co., Ltd., agents for Hudson and Dodge cars in New South Wales, who recently arrived in San Francisco from Sydney, N. S. W. "The farmers and sheep ranchers are prospering now as never before, since the government has taken over the entire output with satisfactory prices. Men in business and trades of every line are meeting with unbounded success, all of which, of course, greatly aid automobile sales.

"It is really extraordinary, the number of cars we sell, considering the severe handicaps we work under, compared with the dealer in the United States. In the first place, the price of the car in Australia is naturally away above that asked in America. On a medium-priced car, such as the Dodge, the freight from Detroit to Sydney approximates \$450, to which must be added about \$250 for duty and a further 12 per cent on the value of the cars for insurance while en route. On account of the long trip, which up to the present time has averaged about sixty days, and exposure to the damp, salty air, the cars often arrive at Sydney in very poor shape. Steamers are getting very scarce now, and importers are forced to employ sailing vessels, increasing the length of the voyage, subjecting them to greater liability to damage, and also increasing the expense of insurance, which is quite an item at the present rate of 12 per cent.

"The Australian government has placed an embargo on motor car bod-

ies to this extent: Of three cars imported, only one can be brought in complete. The other two vehicles must be chassis only. This is a considerable handicap, for there are practically no facilities in Australia for manufacturing automobile bodies, and the finish of those that are made cannot compare in any way with the American-built body. Another hindrance to larger automobile sales in Australia is the very bad roads, which make three thousand miles a really high mark for a set of tires."

Los Angeles Has Over 52,000 Cars.

The city of Los Angeles, Cal., has more than 52,000 motor cars and motor trucks running on its streets, according to the latest unofficial figures. The total number of cars operated in the city has been slightly increased by visiting cars from the East, which have been registered at more than a hundred a week at the Los Angeles office of the California State Motor Vehicle Department.

\$2,000,000 Norwalks for Coast.

More than two million dollars' worth of Norwalk tires will be distributed throughout the Pacific Coast territory during 1918, according to plans of the Norwalk Tire & Rubber Co. and its distributing concern on the Coast, the Lichtenberger-Ferguson Co., of Los Angeles and San Francisco.

New Top Factory in Los Angeles.

The reputation of Los Angeles for distinction and originality in automobile body and top building is to be further enhanced by the opening of the Dustin & Roman Auto Top Co. in that city. The company has been organized by G. F. Dustin, formerly connected with the George R. Bentel shops. Factory quarters and showrooms have been acquired at Eleventh and Figueroa streets, and, according to Dustin, the new automobile top factory will be one of the most modern of its kind in western America.

BIG PACIFIC SHOW LARGER THAN EVER

Coast Exhibition Will Vie in Importance and Beauty With National Affairs in New York and Chicago.

Final preparations on the Pacific Coast Automobile Show, to be held in San Francisco, are being accelerated by the fact that the opening date, Feb. 16, is now but two weeks ahead. Heightening the natural interest aroused throughout California among the automobile trades, is the memory of the handsome appointments and unbounded success that surrounded the San Francisco exhibition of 1917. The extremely favorable attitude taken in the Bay counties is duplicated in the inland Valley country and the southern part of the state, mindful of the unqualified success of the recent Los Angeles show, will be well represented in San Francisco at the exhibition which has come to be regarded as representative of the Pacific Coast territory in general. Interest in the coming event was especially noticeable among automobile men in Sacramento, Fresno and Stockton, where it is declared a noticeable stimulus to car sales was felt last year that was directly traced to the San Francisco show.

Among the displays will be some of the identical cars which graced the two 1918 national shows at New York and Chicago. Other dealers will exhibit special models of their own, drawing in many cases upon the local Pacific Coast talent for motor car design. The decorative plan of last year's show reached a perfection that it will be hard to surpass, but it is confidently felt that this year's efforts will again make the Pacific Coast event a worthy contender, both as regards size and arrangement, to the national shows of the East.

S. F. FORD DEALERS' FORM ASSOCIATION

Secure for Owners Benefits of Comprehensive Service Policy and Help Members With Sales Ideas.

The Ford Authorized Dealers' Association has been recently organized in San Francisco, Cal., with the primary intent of securing for all Ford owners the benefits of a comprehensive service policy, and for all Ford dealers the benefits of the various selling and service ideas of the heads of the different concerns. A similar Ford dealers' association has been very successful in St. Louis, but San Francisco may be said to be pioneering the way on the Pacific Coast. As in every other city of any size, the selling and handling of Ford cars forms a considerable proportion of the automobile industry in San Francisco. During the last twelve months the number of Ford cars on its streets has been increased by the sale of 2,500 cars by Ford dealers. Throughout the state of California there were approximately 75,000 Fords in operation last year. The San Francisco dealers will work to dissipate the impression which has prevailed in the public mind for the past year that the buying of a Ford car means a wait of several months before it is finally delivered into the hands of the owner. Such a condition did exist a few months ago, they admit, but now it is possible to have Fords delivered promptly following the order.

Takes Armstrong Tubes in No. Cal.

James S. Remick Co., Inc., Eleventh and K Streets, Sacramento, one of the oldest jobbing firms in California have just completed arrangements with John Jay Ross, Pacific Slope distributor for Armstrong inner tubes, to handle the tube manufactured by The Armstrong Rubber Co., in Northern California and Nevada. Remick & Co., are now building a new \$100,000 store and warehouse at the corner of Twelfth and Kay streets, which when completed will give them one of the most modern equipped establishments in the business, and both the Remick Co., and Mr. Ross are to be congratulated upon the arrangement just made.

Ambler Heads Somerville Sales.

A. C. Ambler has been appointed sales manager for A. G. Somerville, Stearns-Knight and Nelson car dealer in San Francisco.

L. A. May Lower Gasoline Grade.

An ordinance proposed in Los Angeles permitting the sale of a lower grade of gasoline is now agitating the city council, the motor car dealers and the general car-using public in that city. Los Angeles has for years been getting the highest grade gasoline of any city in the United States, according to the director of the department of oil inspection. The lower grade proposed would be to all practical uses the same as that sold now, he adds. The average daily consumption of gasoline in Los Angeles is estimated at 250,000 gallons and this great amount represents, according to the director, the "cream" of the gasoline. Certain so-called synthetic fuels will be admitted under the new law, but they will have to eliminate the disagreeable odor before finding general sale.

Duplex Truck Doing Road Work.

The commissioners of Tillamook Co., Ore., are doing their share in getting out spruce for the War Department. They realize that the first essential is the ability to transport logging equipment to camps and to provide the means for getting spruce logs to railroads and waterways in order to reach the mills.

With this fundamental in mind County Judge Hare and Commissioners Owen and Alley are urging the repair and completion of roads in Oregon's big spruce county.

In order to provide all-year power for crews and equipment on road work the County Board has ordered a Duplex four-wheel drive 3½-ton truck. Frank B. Thompson, of Portland, Duplex expert for the Northwest Auto Co., demonstrated the power and economy of this truck to the commissioners in no uncertain manner and it will be "on the job" immediately after being exhibited at the coming automobile show at the Portland Auditorium Feb. 7th-13th.

Savage Tire Branch for Northwest.

The Savage Tire Co., of San Diego, Cal., has established a factory branch in Seattle, Wash., which will handle the distribution of Savage tires in Washington, Oregon, Idaho and Montana. A. E. Kelley will act as factory branch manager.

Lyon, of C. & L., Made Jobbers' V.P.

At the recent third annual meeting of the National Association of Automobile Accessory Jobbers in New York, S. F. Beecher was elected president of the association. P. H. Lyon, of Chanslor & Lyon, the well known Pacific Coast Accessory house, was elected vice-president.

Champion Spark Plug Car Coming.

The Champion Spark Plug Co., Toledo, O., is striving to minimize the problem of transportation by adding to its present fleet of automobiles. Recently, the company placed an order for twelve new cars for use of members of its sales and advertising staffs, increasing the number of motors to twenty-three.

One of these cars, a Studebaker, has just started upon a trip covering 20,000 miles. It left the Toledo offices of the company last week, bound for Los Angeles via Chicago, Kansas City, Santa Fe and Phoenix.

The car will be gone twelve months. It is in charge of Vaughn J. Snively and Stanley Matthews. The Champion representatives will distribute advertising material and install window displays for dealers during a ten-month stay on the Coast. The return trip will be made via Salt Lake City and Denver.

Service for Coast Briscoe Owners.

E. W. Hobson, one of the traveling mechanics of the Briscoe Motor Corporation, of Jackson, Mich., is now in Los Angeles in connection with that company's plan of giving all Briscoe owners on the Pacific Coast the benefit of the advice and services of competent factory men. Mr. Hobson has covered the Coast from Seattle southward, and at present has his headquarters with Don W. Carlton, Briscoe representative for Southern California and Arizona, at 11th and Flower streets, Los Angeles.

Star Tires for Cal. and Nevada.

The California and Nevada territory for Star tires has been taken over by E. W. A. Waterhouse, of the Waterhouse & Lester Co., who will carry a complete line in its San Francisco, Los Angeles and Oakland stores. The deal was closed by O. L. Weaver, secretary of the Star Rubber Co., who visited San Francisco for several days.

Eckhart in Southern California.

Morits Eckhart, president of the Auburn Automobile Co., of Auburn, Ind., is now in Southern California for a short period of recreation and surcease from the chilly winds of the East. He is stopping in Hollywood, a suburb of Los Angeles.

L. H. Rose Adds Brockway Truck.

L. H. Rose, president of the L. H. Rose-Chalmers Co., of San Francisco, has expanded the activities of his firm by adding the agency for the Brockway heavy-duty truck in the Northern California territory, according to the announcement of Jacob Hirsch, of the Hirsch Motor Co., which handles the Brockway for the Pacific Coast territory in general.

Oldfield Forms Own Tire Company.

Barney Oldfield has decided to strengthen his profitable interest in the Firestone Tire & Rubber Co., of Akron, O., and with that purpose in view has organized the Oldfield Tire Co., of Los Angeles, which will make a specialty of selling Firestone tires. The new company, incorporated for \$50,000 by Oldfield, R. R. Colby and Frank Chance, has purchased the business of the Forsythe Tire Service Co.

Spokane Has 12,127 Cars.

The annual period of motor vehicle registration in Washington has furnished striking proof of the increase of motor cars and trucks in Spokane county, the center of the prosperous farming and grain district broadly termed the "Inland Empire." On one day last year, Jan. 9, 1917, the county auditor's office issued 8,242 licenses. On the same date this year, the office issued 12,127 licenses, an increase of 3,885 cars.

Northwest Adv. Firms Consolidate.

The advertising interests which have worked to make known throughout the West the merits of Portland, Ore., manufactures, have been practically consolidated with the formation of the Botsford Advertising Co. and the Deute-Tyler Co., both of Portland, into the Botsford-Tyler Co.

Heads C. & L. in San Francisco.

Frank Enos, who has followed the automobile industry since the prime of steam-driven Locomobile and curved-dash Oldsmobile, has been appointed manager of the San Francisco branch of Chanslor & Lyon. After becoming connected with the well-known accessory firm some seven years ago, Enos resigned to direct United States tire activities in the San Joaquin Valley region as manager of the United States Rubber Co. branch at Fresno, Cal. Later he rejoined Chanslor & Lyon in 1915.

Harroun and Elgin in Portland.

The agency for the Harroun car in Portland, Ore., Multnomah county and the adjacent country has been taken by Lee L. Gilbert, simultaneously with his purchase of the agency rights for the Elgin car from A. C. Stevens, who remains distributor of Winton and Haynes cars. In order to go into business for himself, Gilbert resigned as sales manager for Stevens.

Stutz Represented in Portland.

The Stutz car is now represented in Portland, the Autorest Garage, of which G. D. McPhail is manager, having been awarded the Oregon distributing agency.

Durant to Handle Scripps-Booth.

R. C. Durant, Pacific Coast sales manager for the Chevrolet Motor Co. and head of the Chevrolet Motor Co. of California, has severed his connection with the Oakland, Cal., factory, and will take over the distribution of the Scripps-Booth on the Pacific Coast. He will be president and general manager of the Scripps-Booth Co. of California. Associated with him will be Norman Devaux as vice-president and Clifford M. Steves as secretary and sales manager.

Caister Heads Marmon in South.

E. E. Caister, formerly acting as sales manager for Al Faulkner, of Los Angeles, Marmon car distributor for the Southern California territory, has been advanced to the position of manager of the Faulkner establishment in Los Angeles. The promotion is the result of the recent expansion of Faulkner's activities, whereby he becomes Marmon agent for all California, Nevada and the Hawaiian Islands.

Oldsmobile Co. of Oregon Expands.

With two hundred and thirty-four Oldsmobile cars already disposed of under its 1918 contract, the Oldsmobile Co. of Oregon, Portland, Ore., has leased an entire two-story building at Broadway and Couch St. The company is headed by Edward E. Cohen and was established in 1916, in which year the company insured its success by selling 65 Oldsmobile cars.

Motor Trucks Open Up New Mines.

"Motor trucks have proven a boon in opening up mineral properties hitherto an unprofitable distance from railroad transportation," says Bulletin No. 74, issued by the State Mining Bureau of California, describing the mineral output of the state during the year 1916. "The advent and improvement of motor vehicles has induced the building of better roads everywhere, thus benefiting the miner and farmer, alike."

New S. F. Quarters for Daniels.

Daniels cars in San Francisco, where they are handled by the Phillips Distributing Co., are now sold from larger and more elaborate quarters on Post street, opposite Union Square.

Olympian Car Enters Northwest.

The Olympian car, for which agencies have been established to cover the state of California, has entered the Pacific Northwest territory, where Harry M. Fowler, head of the Fowler Garage, of Seattle, Wash., has undertaken to distribute the car throughout the state of Washington.

1917 PROSPEROUS FOR UTAH DEALERS

Passenger Car Sales Increase 75 Per Cent and Truck Business is More Than Tripled Over 1916.

Motor car dealers in Salt Lake City and throughout Utah in general, in looking back over the past year, find only one serious drawback to mar their satisfaction, that being the difficulty of getting cars fast enough from the factories. During 1917 there were 18,302 cars registered in the state, exclusive of 3,215 trucks, indicating an increase of 75 per cent in passenger cars and over 200 per cent in trucks, as compared with the registration figures for 1916. Idaho, a territory which receives most of its cars through the dealers in Salt Lake City, registered 24,569 cars during 1917, showing an increase of close to 100 per cent over the 1916 figures. The Salt Lake City automobile row has widened in area with the erection of several fine-appearing buildings. Social Hall Ave. has become practically a new automobile district, in addition to the older automobile row situated along South Main, on Fourth South St. and in the uptown district along State St. in the first block south of South Temple.

Rau, of Elgin, on Coast.

Rutherford Rau, representing the Elgin Motor Car Corp., Chicago, is traveling on the Pacific Coast for the company. Mr. Rau has been very favorably impressed by the business conditions as he has found them all along the Pacific Coast.

Heads Hupp Sales in San Francisco.

E. W. Milburn, manager of the San Francisco branch of the Greer-Robbins Co., has announced the appointment of George H. Dean as sales manager of the branch. The appointment followed shortly after the taking over of the entire state of California, including Nevada and Arizona, for the Hupmobile line by the Greer-Robbins Co., whose activities were formerly confined to Southern California. Dean will have entire charge of retail sales in San Francisco and the adjacent county of San Mateo.

New Goodyear Manager at Butte.

The Goodyear Tire & Rubber Co. announces that P. A. Kerns, former manager at Butte, Mont., has been made manager at Buffalo, N. Y., W. J. Peete, who has been handling government business at Washington, succeeds Mr. Kerns at Butte.

LAYING TRAPS FOR S. F. TIRE THIEVES

State Automobile Association and Police in Combine to Put Stop to Operations of the Bands.

Tire thefts in San Francisco, Cal., have increased noticeably during the last month of two and the explanation is thought to be found in the fact that the thieves have become organized to some extent in bands. The California State Automobile Association has pushed an active campaign against tire thieves and has secured the co-operation of the police authorities. Cars have been used as "plants," left standing in the streets and carrying tires whose newness could not be doubted, while detectives lay in hiding after the driver left the car. Two thieves have already been apprehended in this way. During the month of December about \$2,000 worth of tires were stolen.

Portland Has Car Theft Problem.

Portland, Ore., is now afflicted by one of the metropolitan conditions that seem to inevitably result from the rapid increase of automobiles in large cities. The local police records show a total of 526 automobiles stolen during the year ending December 31st. Conservatively estimating the average value of each stolen car at \$750, the thieves got cars worth \$394,500 during the year 1917. Police vigilance at no time relaxed, however, and the recovery of 474 stolen cars makes a very creditable showing.

Wagner Connected with Horseless Age

Fred J. Wagner, former proprietor of Motor West and one of the best known men in the automobile industry, has become associated with the Horseless Age, an Eastern automobile publication located in New York, as advertising manager. During the past ten years or so Wagner has been nationally famous as official starter for the contest board of the American Automobile Association in practically all of the big racing events held throughout the country.

Stearns Sales Mgr. a Visitor.

J. V. Thomas, sales manager of the F. B. Stearns Co., of Cleveland, O., was a recent visitor in Los Angeles, Cal.

Nares Heads Cal. State Assn.

L. A. Nares, of Fresno, Cal., has been elected president of the California State Automobile Association.

Robinson Leaves Kissel for Ford.

Automobile dealers and motorists generally along the Pacific Coast will be interested in the announcement that A. S. Robinson has resigned as Northwest manager of the Pacific KisselKar Co. to go into business for himself in Portland, for Mr. Robinson has been associated with the Kissel-Kar people on this Coast for many years, and has been in the automobile industry since almost its earliest days.

With A. B. Smith, wholesale man for the Seattle KisselKar branch, Mr. Robinson bought out the Ford agency in Portland of W. H. Wallingford. This agency has a 550-car contract and occupies a four-story building at Sixth and Madison streets, being one of the largest Ford agencies in the West. The new firm, which will be known as the Robinson-Smith Co., will have its own trimming and painting department and body building shop.

The acquirement by Mr. Robinson and Mr. Smith of the Wallingford agency was part of a deal whereby Mr. Wallingford bought out E. A. Mitchell, Oregon distributor for the Premier and Liberty. Mr. Mitchell will go East to engage in the tractor business. Until recently, when Mr. Wallingford took the Ford agency and removed to the quarters now taken by the Robinson-Smith Company, Mr. Wallingford and Mr. Mitchell were partners under the name of Mitchell & Wallingford, handling the Premier, the Liberty and Ford.

Kelly-Springfield Truck in Portland.

W. S. Warner, representing the Kelly-Springfield Motor Truck Co., was in Portland recently to arrange to have the Kelly-Springfield truck represented there.

Ford Agents Sell Form-A-Trucks.

All authorized Ford agents in Los Angeles will be permitted to act as representatives for the Smith Form-A-Truck, according to a new policy adopted by the Smith Form-A-Truck Sales Co., of Los Angeles, Pacific Coast branch for the Smith Motor Truck Corp., Chicago.

Chevrolet Branch in Spokane.

The sales of Chevrolet cars in eastern Washington and northern Idaho, a territory of which Spokane, Wash., is the metropolis, will be handled from a factory branch established in that city by the Chevrolet Motor Co. W. C. Hendricks, who has been assistant to R. C. Durant, sales manager at the Chevrolet branch plant in Oakland, Cal., for some time, has been appointed manager of the Spokane branch.

Oakland Chevrolet Has 1,500 Orders.

The Chevrolet Co. of California, in its plant at Oakland, Cal., will make close to 1,400 Chevrolet cars during the present month. The total amount of orders now on hand with the Oakland plant is approximately 1,500. In addition, 235 cars of the larger Chevrolet type, which the Pacific Coast plant is not yet equipped to make, are now coming from the East. About one million dollars will be spent on improvements and additions to the Oakland plant this year.

Prosperity Remains With Hamlin.

Ralph C. Hamlin, of Los Angeles, Franklin car distributor, has no reason to consider that hard times have settled down on the Pacific Coast. During the month of December the Los Angeles agent sold 22 Franklin cars.

Funerals and Other Amusements.

Any car-owning citizens of Oakland, Cal., who have doubted the possession of a sense of humor on the part of their local chief of police, J. Henry Nedderman, lately had all uncertainty banished by a recommendation he made to the city council for the revocation of two jitney bus licenses. "These license holders have violated the traffic laws and the jitney bus ordinances," he writes. "They have persisted in running off their regular routes and carrying people to funerals and on other excursions." Oakland's automobile fraternity think he might have added, "To the cemetery and other places of amusement."

Takes Marmon in Oakland Vicinity.

Philip Cole has taken the Marmon car agency for the trans-bay territory, embracing Alameda and Contra Costa counties, wherein are located the large cities of Oakland, Alameda and Berkeley.

Sells, of E. C. Anthony, to S. F.

E. N. Sells, manager of the Los Angeles used car department of Earle C. Anthony, Inc., has gone to San Francisco to take charge of the company's used car end there. George Kussman succeeds him in Los Angeles.

Rubber Shipment Rates to P. C. Raised

Crude rubber from the Straits Settlements, which is now entering the United States through the Pacific Coast ports in large quantities, is now shipped at the rate of \$95 a ton, compared with the former price of \$24 a ton, the increase being due to the scarcity of shipping caused by the world war. The Akron, O., factories, the center of the automobile tire industry, use about half of the supply from the Straits Settlements.

Leach Faces on Grand and Olive.

The Leach Motor Car Co., of Los Angeles, Cal., has leased garage and sales room quarters at 1127 S. Olive St., which were formerly occupied by the George I. Lufkin Co. The company's main office will remain on Grand Ave. and the Premier and King 8 show will be continued there. The service department will be located in the Olive street building, which is directly connected with the Grand Ave. quarters, thus giving an outlet on both Olive St. and Grand Ave. The Leach company has been contemplating a large new building for some time, but has found itself unable to continue in its present quarters alone until the time when the new home will be ready.

Armstrong Sold 684 Chandlers.

Earl V. Armstrong, Inc., Los Angeles, placed 684 Chandler cars in the hands of owners during 1917, according to Don Smith, vice-president of the company. Of this number, 432 were consumed in Los Angeles county.

Ford Branch Big Portland Asset.

The Ford Motor Co. branch in Portland, Ore., recently made public some statistics which demonstrated what a great asset the Oregon activities of the Ford company are to the metropolis of that state. There are six authorized Ford dealers in Multnomah County and their total working forces are 147 persons. Their combined payroll was over \$141,000 during the past year. During the 1916-17 period the Portland factory branch assembled and distributed 7,447 Ford cars. From Aug. 1, 1916, to Aug. 1, 1917, the assembling plant bought more than \$32,000 worth of material in the Pacific Coast Northwest territory. One hundred and thirty-five persons are employed in the factory branch. A. W. Jones, manager of the factory branch, who assembled the above figures, estimates that the company's branch will have a production of 15,000 cars during the 1917-18 period.

International Truck in Inland Empire.

During the recent visit of M. W. Weeks, general manager for the International Harvester Co. to the Northwest, he appointed the Kearns Motor Sales Co. of Spokane, Wash., to distribute International trucks in the eastern Washington region.

Aubry & Wire Take Acme Truck.

Aubry & Wire, Tacoma, Wash., have taken the agency for Acme trucks in Pierce, Thurston and Lewis counties.

Reach Government Camp New Year's.

More than three months earlier than the feat ever has been accomplished before, an automobile reached Government Camp, at the foot of Mt. Hood, Oregon's favorite snow-capped mountain, on New Year's day, thereby winning the coveted "first-to-Government-Camp" record for 1918. The car was a Ford sent out by the C. E. Francis Motor Car Co., of Portland, and driven by Osmon Royal, who twice before has been the first driver to make the Mt. Hood trip. The previous record, made by Mr. Royal in a Mitchell car in 1916, was April 9. Last year the first car did not arrive until June. Though there has been plenty of rain, there has been virtually no snow or cold weather in the Northwest this Winter, and there was no snow at Government Camp. To achieve their goal, Mr. Royal and his party had to fell trees across the Zig Zag river, which was 120 feet wide and in flood, to replace the regular bridge, which had been washed out.

Feely Auto Editor L. A. Express.

Paul J. Feely, formerly automobile editor of the Portland Oregonian, and at one time publicity director of the Cole Motor Car Co at Indianapolis, Ind., has been appointed automobile editor of the Los Angeles Evening Express. Mr. Feely is also an advertising expert, having for several years directed the advertising campaigns of the Northwest Auto Co., in Portland, Ore.

Don Lee Service Stars Now 48.

Don Lee, Cadillac dealer for California, has no occasion to forget that the United States is at war. The cluster of stars on the Don Lee service flag recently thickened to forty-eight, each one representing a new fighting man in the service of the United States who was once closely interested with the selling of Cadillac cars in California. Despite theoretically unfavorable war conditions, the company's Los Angeles branch has recently been compelled to enlarge its renewed car department by leasing new quarters at 1046 S. Olive street, in addition to its main sales quarters on South Main street.

Defender Auto Lock Man on Coast.

J. J. Calahan, Pacific Coast factory representative of the Defender Auto Lock Co., Detroit, will establish permanent headquarters in Los Angeles after a four months' tour of California, during which he has visited every Ford agent in the State and traveled upwards of 13,000 miles. He states that 92 per cent of the Ford agents in California are now handling the Defender lock. His temporary address is 1001 Union avenue, Los Angeles.

**UNITED MOTORS V. P.
IN SOUTHERN CAL.****Otis Friend Taking Vacation in
Flower Land Before Resuming
Duties With Big Corporation.**

Otis C. Friend, who it will be recalled was under contract with the United Motors Corporation and who was virtually loaned by it to the Mitchell Motors Co., to fill its presidency, has returned to the big parts company as vice-president. The United Motors business has grown so big and the work in connection with it so voluminous that its president, Alfred P. Sloan, has welcomed the opportunity of once more securing the services of Mr. Friend, whose ability and experience will be of the greatest value in the counsels of the big company. His recent retirement from the Mitchell presidency marked the completion of the work for the accomplishment of which he was called there and which it was felt no one but he could do. His knowledge of the Mitchell business was unusually thorough, he having grown up through the various departments of manufacture, purchasing and sales, occupying various departmental chairs until he became president. Mr. Friend is at present enjoying a rest here in Southern California, and expects to assume his duties on or about February 15.

Carlton Takes Briscoe in South.

Don W. Carlton, of Los Angeles, Cal., has taken the Southern California agency for the Briscoe car, manufactured by the Briscoe Motor Corp., of Jackson, Mich.

Leavitt Merges Chevrolet and Olds.

The merging of the sales and service of Chevrolet and Oldsmobile cars in Los Angeles, Cal., has been announced by the J. W. Leavitt Co. branch in the southern city. Oldsmobiles and Chevrolets will both be retailed from the headquarters established at 1150 S. Figueroa St., while the service end will be handled from 1212-16 S. Olive St., the old home of the Chevrolet in Southern California. E. A. Maginnis has been appointed manager of the used car departments. D. L. Bolton has been appointed sales manager of the Oldsmobile and Chevrolet.

Rose Adds Truxtun Unit.

L. H. Rose, head of the L. H. Rose-Chalmers Co., of San Francisco, has taken the local agency for the Truxtun Unit, a truck attachment.



NEW BIG BEAR LAKE TAVERN. (INSERT) COMBINATION VEHICLE WHICH WILL MAKE IT ALL-YEAR RESORT.

Big Bear an All-Year Resort

Finest Hotel in California Now Under Roof, and Plans Perfected for Winter Transportation

EASTERNERS who migrate to Southern California have, on occasion been known to express a longing for "just a whiff of the good old winter air—the kind you get on a January morning in Iowa, for instance. Not for long, you know; just a day or two, or possibly a week. Then back here to the roses, the oranges and the strawberries." Even those to the manner born sometimes say that a few days in the snow and the ice would be bearable, especially if it were possible to get back to "God's country," as they call it, whenever they have a mind to.

Well, the seekers after Winter's joys, who become sated with Southern California's January sea baths, sun-burn and flowers, will find it possible after the present winter to indulge their craving for climatic contrasts to the full, for when present plans are completed the trip from the semi-tropic temperature of Los Angeles to the frigid winds and the snow and ice of Big Bear Lake will be a matter of but five or six hours.

These plans contemplate a regular motor stage service from San Bernardino to Big Bear, via Victorville and the desert, winter and summer alike. The problem of conquering the snow-choked roads of the San Bernardino

mountains has practically been solved, so that Winter visitors to the great resort will have the assurance that there will be little or no delay on the trip. And when they arrive at their destination they will find one of the finest mountain hotels in the country—one of those huge, comfortable, cozy, well-cuisined caravansaries such as the traveler delights in, especially after a long, cold mile-high ride under the wintry sky.

The Big Bear Lake Tavern has been built since the close of the summer season by the Big Bear Lake Tavern Co., of which Albert L. Brush is president. It is now under roof and will be thrown open to the public about June 15th next. After that it will never be closed, for it will be an all-year-round institution.

It is situated directly on the shore of the beautiful lake after which it is named, and will be equipped with all the conveniences which will make it a desirable stopping-place winter or summer. As the only feasible method of transportation to and from Bear Valley is the automobile, especial efforts will be made to attract motoring parties. Indeed, Contractor C. L. Robinson, who built the tavern, declares that the plans were made with special reference to taking care of parties of automobile travelers, and a large garage, equipped with hot and cold shower baths, has already been erected. The main building has 20 sleeping rooms, while the three cottages so far erected have 15 additional rooms. Parties consisting of several carloads of passengers can each have quarters of their own, the main building being designed on the unit principle and the cottages being of different sizes. The rooms are all large, and if necessary it is possible to take care of upwards of 100 guests at a time.

The dining room is so large that it can accommodate the entire list of guests at one sitting, while the kitchen has been fitted up with special reference to quick service.

Having been built especially for the accommodation of winter guests, the walls are of double thickness on a concrete foundation, while the huge fire-place, 12 feet across, can accommodate 8-foot logs. This latter attraction features the big lobby, which is 70x40 feet in dimensions, and an ideal gathering-place on a cold stormy winter's night. The office, which is located in a corner of the lobby, is a miniature log cabin. Indeed, the rustic idea has been carried out throughout the entire Tavern, benches, writing desks, dining tables, yes, even the beds and the bedroom chairs, being of the natural logs, but handsomely finished.

With its own refrigerating and electric plants, ladies' and gentlemen's rest-rooms, reading-room for the help after work hours, and many other bits of equipment found only in the modern hotel in a metropolitan city, the most blase and finicky traveler will doubtless find in the Big Bear Lake Tavern the kind of service he hopes for, but seldom gets in a mountain resort, especially in winter.

It is the intention of the management to put on a carnival of winter sports some time next December or January, probably soon after the Truckee carnival. This will consist of toboggan, ski, skating and other speed contests, arrangements having been made whereby a large area of the lake in front of the Tavern can be cleared, covered with a thin film of water and frozen overnight whenever a new surface is desirable.

To W. W. Pedder, a well-known Los Angelan, having large interests in Bear Valley, is due much of the credit for having solved the problem of winter transportation to the Valley. He has spent much time and money in trying out various plans, and during this and last winter has experimented with caterpillar tractors and trucks, with the result that he at last evolved a combination of the two which gives every indication of handling the traffic promptly and regularly. The success of this device will mean that Bear Valley, which has heretofore been cut off from the rest of Southern California for periods ranging from four to six months, will be open to the public 365 days in the year. The Moreland Motor Truck Co. has built after Mr. Pedder's design the vehicle illustrated elsewhere in this article, using one of its one-ton chassis for the purpose. Mr. Pedder consulted with O. H. Stevens, manager of the Los Angeles branch of the Holt Mfg. Co., regarding the design of the caterpillar feature of the rig.

This vehicle, under ordinary road conditions, uses its four wheels in the usual manner, but when snow is encountered the front wheels are equipped with runners so designed that any one of the three sections of which they are composed may be placed in position or removed, as more or less bearing surface on the snow is required. Idler wheels have been placed in front of the rear wheels, and over these traveling bands with metal strips placed crosswise form endless tracks similar to the caterpillar tractor track-layer device. It can accommodate 16 passengers in a pinch, has a maximum speed of 12 miles per hour over the snow, and 25 miles per hour when running without the snow rig. Hub drums are fitted to the rear wheels for emergencies, and the ratio on low gear is such that the rig can cope with any grade or soft road conditions it is likely to encounter in the mountains.

If the combination is as successful as Messrs. Pedder,

Moreland and Stevens predict it will be, the design will be offered to the United States Government for use abroad. It is apparent that if the vehicle as designed can cope with the conditions as they exist in the San Bernardino Mountains in winter, it will be found extremely useful in the mountain warfare in Italy, the Vosges and elsewhere.

The rig as shown here has been subjected to the severest of tests in deep mud, heavy blow sand and on grades exceeding 30 per cent, and in every instance has come through with flying colors.

New Automobile Road into Sierra Madre Range Planned

An automobile highway which will penetrate into the fastnesses of the Sierra Madre mountains back of Los Angeles, making them accessible by automobile to thousands of summer vacationists who have heretofore been compelled to travel into them by foot, is the project of the Los Angeles county road department. The scenic advantages of this mountain country, which, though practically at the door of the large city of Los Angeles, has retained all of its native wildness, are unparalleled by any other section of the country. Leaving the Mount Wilson road the new highway will run east of Mount Gabriel and down the Arroyo Seco, a distance of more than twenty miles. It will skirt peaks overlooking the entire eastern slope of the Sierra Madre range and run through heavy pine forests. According to the forest rangers water in plenty will be found deep in the gulches during the summer and unlimited possibilities for camping grounds will be offered to the thousands of mountain campers coming from the thickly settled Los Angeles region.

Tacoma, Wash.—The Universal Motor Co. held its annual election recently, at which W. C. Baldwin was elected president; E. M. Baldwin, vice-president; and J. K. Gordon, secretary.—The Puyallup Ave. Garage has been taken over by Hague & Son and the name has been changed to the Hague Garage & Machine Shop.



ANOTHER VIEW OF THE BIG BEAR LAKE TAVERN.
SOME OF THE COTTAGES AUXILIARY TO TAVERN.



PORTLAND CITY AUDITORIUM, WHERE NINTH ANNUAL AUTOMOBILE SHOW WILL BE HELD, AND MEMBERS SHOW COMMITTEE.

Portland Show Climax of Successful Business Year

Exhibition Will Be Indicative of Pacific Northwest Prosperity — 48 Exhibitors Will Show 122 Passenger Cars, 15 Motor Trucks and 9 Tractors Under One Roof—Only Show in the Territory This Year — War Helping the Industry

PORTLAND, ORE., Jan. 28.—Portland's ninth annual Automobile, Truck and Tractor Show, which begins Thursday, February 7, and continues to February 13, inclusive, will be a fitting climax to a remarkable year in the automobile business in the Pacific Northwest.

The year 1917 has been in all respects the best the automobile industry has known in this territory. Sales have been better by far than ever before. This applies both to the brisk Spring and Summer season, when sales are always good, and to the usually dull Winter season as well.

Since the close of the 1917 serial automobile license year on November 12, approximately 900 new cars have been sold in this territory. This is just about twice as many as were ever sold in Oregon before during that period. Bear in mind that this has been during the very height and apex of the rainy season, and that it has been very, very wet in Oregon this Winter.

That is one indication that business is pretty good. Another is the fact that collections generally are better than they have been in seven years. Still another sign that Oregon is doing pretty well, thank you, and that the eyes of the automobile industry are turning this way, is the fact that eleven makes of cars not previously represented here have entered the territory since the 1917 automobile show one year ago, and that hardly a week passes that some new tire or automobile accessory company does not establish connections in Portland for the state.

The eleven new cars to come into the Oregon field since last February are the Elgin, Liberty, Premier, Roamer, Hal, Apperson, Stutz, Nash, Lexington, Olympian and Harroun.

Several other motor car manufacturers are looking this way very intently, and have had representatives out with feelers for agencies. Some additions to Portland's automobile row may therefore be expected shortly.

The reasons for the trade revival in the state and its effect on the automobile industry are several. One is that farmers of Eastern Oregon again got high prices for their wheat. This being the third year in a row that exceptional wheat prices have prevailed for grain—and for livestock as well—the wheat growers and the stockmen have their pockets full of money. And they are all buying cars.

Ship building affects an entirely different part of the state than the grain situation, but its effect has been no less marked. The big payrolls and high wages being paid for labor have brought about prosperous conditions in Portland and along the Columbia and Willamette rivers, the banks of which are dotted with shipyards.

This industry has given automobile men an entirely new line of prospects. Workers in the shipyards are making money and looking about them for the comforts of life. They all want automobiles. And they are buying them. There is a big market among them for the lower-priced cars.

The big spruce drive in Oregon and Washington also is affecting the automobile industry here. Its future effect is likely to be greater than its present one. Aside from putting more money into trade circulation, automobile men who are careful students of the situation believe it is going to help very greatly in solving their problem of getting cars from the factories. And for this reason: A great many freight cars will be required to load airplane spruce for delivery in the East. As the east-bound freight movement from the Pacific Northwest is much greater than the west-bound movement, it will be necessary to bring empties from the East to provide spruce cars. Here, then, is the opportunity of automobile men to see that instead of coming out empty, these cars come West loaded with automobiles.

How good a year 1917 in general was in the automobile industry in Oregon is still further indicated by the number of motor car licenses issued during the year by Secretary of State Olcott.

At the close of the 1917 series of licenses, there were 48,700 cars licensed in the state. Licenses were issued to 14,914 new cars, as compared to 10,542 for 1916.

In the truck field the gain was even more pronounced. Whereas in 1916 truck sold, exclusive of Fords of which no record was kept, totaled only 246, in 1917 the number of new trucks sold, exclusive of Fords, was 608, a gain of more than 150 per cent, in addition to which 256 Ford trucks were commissioned.

In this connection it should be emphasized that these figures are accurate, inasmuch as in Oregon there is no duplication of licenses as in many other states. When a car is once licensed, it keeps that same license for the remainder of the year, regardless of whether it is later sold. There are no transferable re-issues, adding to the total licenses issued but not to their actual number.

The year 1917 saw a beginning made in a comprehensive program for hard-surfaced roads through Oregon, and a good start on the highways. This has been of incalculable benefit to the automobile industry.

In view of the condition of the trade in Oregon and the bright prospects for 1918, it will be seen that the coming automobile show is awaited with more than usually keen interest. The number of exhibitors will be greater than before, more cars will be shown, and a bigger attendance than ever is expected.

Special endeavors are being made to interest the farmers of Oregon and Washington in this year's show. The farmer is a very well-to-do citizen these days, and if he makes up his mind to buy a passenger car, or a truck, or a farm tractor, he can and will do so on the spot.

Special delegations are expected down from Vancouver, B. C., Seattle, Tacoma and Spokane for no automobile shows will be held in any of these cities this year. Governor Withycombe of Oregon will deliver the address at the opening of the show, and Governor Listner of Washington is expected also. Incidentally, rather an unique little ceremony has been arranged in connection with the opening. Governor Withycombe will step on the stage of the big city Auditorium, where the show is to be held, and there will press an automobile self-starter. This will turn on the lights and start the show.

Especial attention has been devoted to illumination effects. Light standards 10 feet high will be placed at frequent intervals on the big floor. Each of these standards will have three light bulbs, one red, one white and

one blue. By means of "skiddoo" plugs, these bulbs will alternately be going on and off, all over the house, giving a most striking effect of red, white and blue lights blinking on and off.

Reservations have been made for 122 cars, about 15 trucks and eight or nine tractors in the show. Following is the list of exhibitors:

Apperson Motor Car Co., Apperson.
Bancroft & Wright, Smith Form-a-Truck.
Bean Spray Pump Co., Track Pull Tractor.
C. L. Boss Automobile Co., Hudson and Maxwell.
Brady Auto Co., Franklin.
Brunn Motor Car Co., Lexington.
Burness & Martin, rebuilt Bug.
O. E. Butterfield, Simonizing.
Camelford Co. of Oregon, Camelford truck attachment.
Champion Spark Plug Co., Champion spark plugs.
Columbia Storage Battery Co., Columbia batteries.
Cook & Gill Co., Paige.
Covey Motor Car Co., Cadillac and Dodge.
Sam Connell Lumber Co., Millmade Garage.
W. B. Doane, Olympian.
Ford Dealers, Ford cars and trucks.
George G. Gerber, shock absorber.
Hutchinson & Rogers, Gates Half-Sole Tires.
International Harvester Co., Titan Tractor, Mogul truck and International truck.
Kero Kerosene Carburetor, carburetors.
Lambert Multiplus Co., Lambert Multiplus tire.
McCracken Motor Co., Moreland truck, Utility trailer.
McNeff Tractor Co., Cleveland tractor.
Manley Auto Co., Hupmobile, National and Grant.
Mitchell, Lewis & Staver Co., Mitchell.
Nilson Tractor Sales Co., Nilson tractor.
Northwest Auto Co., Marmon, Reo, Dort, Cole, Roamer, Stearns-Knight Duplex truck, Indiana truck, Ames worm-drive truck attachment, Reo speed wagon, Miller tires, and accessories.
Oregon Moline Plow Co., Universal tractor.
Oldsmobile Company of Oregon, Oldsmobile.
Oregon Motor Car Co., Studebaker, Denby truck, Lalley Farm Light.
Overland-Pacific Co., Inc., Overland and Willys-Knight.
Pierce-Arrow Pacific Sales Co., Pierce-Arrow and truck.
Portland Motor Car Co., Nash and Packard, and Packard truck.
Portland Tire & Truck Co., Master truck.
Presto Cloth Mfg. Co., accessories.
Regner & Fields, Chevrolet.
Roberts Motor Car Co., Republic truck.
A. C. Stevens, Winton and Haynes.
Lee L. Gilbert, Elgin and Harroun.
Tri-State Tire Co., Perfection tires.
Twin States Automobile Co., Chandler.
Universal Tire Filler Co., Universal tire filler.
Van Matre Howard Battery Co., U. S. Light batteries.
W. H. Wallingford, Premier and Liberty, Hood tractor.
D. C. Warren Motor Car Co., Velie and Peerless, Velie truck.
Wentworth & Irwin, G. M. C. truck and Samson tractor.
Western Farquhar Machine Co., Best truck, Wallis Cub and Trundear tractor.
Western Motor Car Sales Co., Hal Twelve and Chalmers.

Calendar of Coming Events

January 26-February 2—Chicago National Show.
January 26-February 2—Automobile Salon, Congress Hotel, Chicago.
February 2-9—Minneapolis, Minn., Show.
February 6-13—Portland, Ore., Show.
February 9-16—Kansas City, Mo., Show.
February 11-16—Third Annual National Tractor Show, Kansas City, Mo.
February 11-16—St. Louis, Mo., Show.
February 16-26—Annual San Francisco Show, Geo. A. Wahlgreen, manager.
February 18-23—Des Moines, Ia., Show.
February 23-March 2—Omaha, Neb., Show.
March 2-9—Boston, Mass., Show.
April 9-13—Stockton, Cal., Show.

Motor West

LOS ANGELES-SAN FRANCISCO-PORTLAND-SEATTLE

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The Lesson of the National Shows

AMERICA'S motor car industry, the third largest manufacturing industry of America, must be kept a "going business" for at the close of the war America will be called upon to supply the world with cars. In every other automobile manufacturing country now at war the industry became almost a thing of the past after the outbreak of hostilities. These countries, England, Belgium, France, Italy, Germany and Austria, will be forced to build up their motor car trade all over again, and the reconstruction period will cover years of hard work. America with a going business will be called upon to supply the world, and will be able to do so only by keeping its manufacturing industries under headway. The automobile shows in New York and Chicago gave evidence to the world and to America itself that the business is still prosperous and that is one-half the battle won.

For many months the reports which have circulated through the daily press and through some publications which profit greatly from the advertising received from motor car makers, have done much harm to the business. There has been work savoring strongly of German propaganda causing discouragements and cross-reasonings which were harmful. Irregular freight shipments, hard winter, putting a stop to driveaways which in the late fall had become a regular custom, inability to secure materials on account of the freight conditions and a thousand and one other things, together with false reports in regard to gasoline shortage and steel supplies, had borne fruit.

But at the two national shows the adjustment of trade conditions to the war was everywhere evident. The makers did not feature the fact, but that all would decrease output was generally known and thoroughly understood. So closely is the automobile and accessory manufacturing business interwoven with the business of manufacturing war supplies of every sort that it is generally conceded outputs must be cut materially in every field.

The public is starting now to realize that it must buy early or perhaps get no car at all. It is beginning to know that automobiles, new or used, will be scarce and in all probability higher in price.

The national shows are an evidence to the world that the American motor car industry is virile to a degree; that it has adapted itself to war conditions, and has trimmed its sails and battened down its hatches so that it will have no difficulty in riding out the storm, however severe it may be. These exhibitions served to restore confidence to many of those who were fearful of the future, and constituted the best advertisement the industry could have adopted. Even those pessimists who had doubted the advisability of holding the shows this year admitted that it would have been a serious error to cancel them.

From every angle the big exhibitions have justified themselves. While few new things were in evidence, refinements in standard models were seen everywhere. Despite the miserable weather, the crowds were up to the management's expectations, and the exhibitors generally were satisfied with the business done.

Last but not least, the big shows are an object lesson in that they demonstrated to the world the tremendous interest taken in automobiles and their appurtenances by the public at large. Surely people would not travel to the exhibitions from every section of the country to inspect what some of our Senators and Representatives are pleased to term "non-essentials." The intense interest manifested in the New York and Chicago shows is the best possible evidence that the American public recognize in the automobile as one of the foremost of modern necessities, and a utility without which it would be impossible for us to win the war.

Passenger Cars Indispensable to Business

THOSE law-makers at the National Capital who seemed inclined to class the passenger automobile as a non-essential evidently did so without giving the matter serious thought.

It seems now that the opinion is almost universal that without the so-called "pleasure car," business could not be carried on under war-time conditions, at war-time speed and with war-time economy.

Even the most pronounced advocates of the "non-essential" idea, insofar as it relates to automobiles, now admit they were mistaken—another indication that a snap decision is usually a wrong one.

It does not require very deep thought to figure out the conservation of man-power inherent in the daily use of three and a half million motor cars.

To say off-hand, as some of our law-makers at Washington did, that the passenger car is primarily a plaything, indicates a lack of reasoning power that makes one wonder just how those wiseacres got to the national capital.

Just to clinch things, a prominent Indianapolis company, which has been building automobiles for a quarter of a century, sent a questionnaire to a thousand of its patrons, selected at random from every section of the country, asking each owner to state whether or not he used his car in his business or for pleasure purposes only.

All kinds of business and all professions were represented—farmers, jobbers, manufacturers, buyers, salesmen, physicians, attorneys, contractors, hotel-keepers, execu-

tives, etc.—living in cities and in rural districts. The replies showed that more than 80 per cent of the owners find their cars indispensable in their various businesses, while a large part of the remainder indicated that the automobiles are essential to the personal efficiency of their owners.

The comments accompanying many of the replies were decidedly enlightening. For instance, a farmer wrote: "I think a car is the life of my business." An engineer and contractor declared that he had "used car 20,000 miles in 1917 in my business exclusively." A prominent manufacturer said: "I must have a car or have an assistant." A hard-worked physician asserted that "were it not for my car, I would have to reduce my practice." A big live-stock buyer maintained that his car enabled him to handle three times the business possible under former conditions. A real estate man averred that he "could not get along without a car." And so on.

In the light of such indubitable testimony, the idea of discontinuing the manufacture of passenger cars on the ground that they are not essential to the business of the nation is ridiculous.

Believe Road Building Necessary to Win War

At a recent meeting of the American Association of State Highway Officials, in Richmond, Va., there was presented to the Government through the Director-General of Railroads, the following resolution, which calls attention to a condition which we believe to be the most important question confronting the highway interests of the country today:

Whereas, the proper construction and maintenance of the highways of the country is necessary to the successful conduct of the war; and,

Whereas, the plans of all highway authorities in the country, all users of highways, and all citizens interested in any way in highway construction and maintenance, are at the present time upset and tied up; and,

Whereas, there is need for a definite policy so that plans can be formulated for the coming year; and,

Whereas, a properly outlined policy directing the construction and maintenance of such roads and streets as are of general economic and military value will conserve the resources of the country and will greatly facilitate the transportation of freight over highways and streets.

Therefore be it Resolved, that the American Association of State Highway Officials request the United States Government to formulate and promulgate, as soon as possible, a definite policy for road and street construction and maintenance, and

That it is requested that said policy contain a statement that freight cars shall be furnished next Spring for the transportation of the necessary materials for the construction and maintenance of streets and roads of economic or military value.

Pike's Peak Ocean-to-Ocean Highway Meeting

The fifth annual meeting of the Pikes Peak Ocean-to-Ocean Highway Association will convene in St. Joseph, Mo., on Wednesday, February 6, and Thursday, Feb. 7, 1918. The opening session will be held on Feb. 6th, at 10 a.m., in the rooms of the Commerce Club.

The year 1917 has been notable in the development of the Pikes Peak Ocean-to-Ocean Highway. It has witnessed the completion of an independent alignment from New York City to San Francisco, and has seen substantial progress in the marking, logging, mapping, advertisement and development of the great central scenic transcontinental route.

Gasoline Is Now Plentiful

Reserve Stocks Accumulating Rapidly—Motor Vehicles Should be Used Freely to Relieve Railroads

INSTEAD of curtailing the use of motor vehicles, as has been necessary in England and France to conserve gasoline for military uses, American car and truck owners will be doing their country a service by using their machines to the fullest extent for the relief of passenger, freight and express traffic on the railroads in the United States, according to the Petroleum War Service Committee of the Council of National Defense.

The gasoline situation, which threatened last summer to result in a shortage, has changed radically. Gasoline economy due to the campaign recently encouraged by the United States Bureau of Mines, the drilling of new oil wells, increased production of gasoline by the "cracking process," decreased use of automobiles during severe winter weather in the East and lack of shipping facilities for export to Europe have combined to cause consumption to fall below production. The reserve supply accumulating will tax storage facilities to the utmost before the winter is over.

A statement issued by the Petroleum War Service Committee indicates that it is desirable to use gasoline for power purposes to insure continuous and ample production of fuel oil for the navy. Gasoline is in the nature of a by-product of fuel oil, which is used also in merchant ships, munitions factories and other industrial plants.

As gasoline cannot be stored in large quantities because of lack of storage facilities and inability to build additional storage tanks at this time, and as it is impossible to ship more gasoline abroad than is now being forwarded to Europe, it is evident that in view of the present coal shortage and railroad congestion, every effort should be made to utilize motor trucks and passenger automobiles for hauling merchandise and carrying passengers on utilitarian errands.

The gasoline situation in this country is not to be compared with that in Europe. England and France are almost entirely dependent upon imports of petroleum products and the ability to import is limited by lack of ships. It is for this reason that the use of motor cars for private use has had to be suspended except for the most urgent requirements. America, on the contrary, is the world's largest oil-producing country and is unable to export more than one-quarter of its gasoline production. To the extent that gasoline, kerosene and fuel oil are used for power purposes the supply of coal is conserved.

Ascot Speedway, in Los Angeles, continues to be an active center of racing on the Pacific Coast, in spite of the fact that each event has been run with the feeling that war conditions will make it the last. The latest program, set for Feb. 3, will be what is considered to be the first open race for women drivers held in the United States. A.A.A. rules have hitherto rigidly banned women drivers from automobile tracks in any capacity but now that the association has decided to countenance no more automobile racing for the period of the war, advantage is being taken of the suspension of A. A. A. rules.



Truck Conquers Yosemite

Fageol Braves Winter Conditions — Carries Load to Valley and Returns, 440 Miles, in 46 Hours

MOTOR TRUCKS have unlimited scope. They can compete with anything from a mule team to a through freight, and win out. Just to demonstrate that no distance is too great, no grade too steep, and no road too rough for a well-designed truck, a loaded Fageol 2½-tonner was driven 440 miles over the high Sierras into Yosemite Valley, and return, January 5-7, in 46 hours—less than two days.

The average freight train traveling on smooth rails and on grades not over 4 per cent covers about 140 miles a day, or six miles an hour. This Fageol truck, traveling under all kinds of road conditions, through mud and snow, over grades as heavy as 30 per cent, and around turns so sharp that backing was often necessary, carried a capacity load of freight through the Sierra Nevada Mountains at an average speed, all stops included, of almost 10 miles an hour—better than 220 miles a day. During the trip seven steep mountain divides were crossed, the highest of which is over 8000 feet elevation.

It is the first time in history that anything of the kind has ever been attempted. It is the first time that the roads and weather conditions in this state would permit it. At this time of the year the mountains surrounding Yosemite are invariably covered with a 10-foot blanket of snow. On this trip snow had to be crossed, but in no great quantities. A considerable amount of rain had fallen,

however, making the soft dirt roads and steep grades almost impassible.

The truck which made the trip is designed and built by the Fageol Motors Co., Oakland, Cal.

Trucks are not ordinarily designed to have both speed and power—the two work in opposition. Speed is sacrificed as climbing power is gained by gear reduction. The Fageol engineers have designed a compound gear reduction which makes possible both speed and power. On the level roads the truck raced through, mile after mile, at 30 miles an hour. In the mountains on grades as high as 30 per cent the compound gear enabled the truck to creep along more slowly than a man walks.

To attain the distance the governor was necessarily released. Thus the motor was crowded at practically its maximum speed for a large part of the entire 46 hours. Transmission gears and final drive were given a terrible gruelling. Frame and body were wrenched and twisted hour after hour. Wheels and tires were roughly abused. Radiation, carburetion and ignition of the Fageol truck were being put through a final test.

Most significant of all, however, was the strain on the springs. Loaded trucks on mountain roads by choice go slow. The truck was pushed at all times at the greatest speed possible under the conditions. The ruts, the "thank-you-marms" and the corduroys in the mountains at this time of year are wicked, but the springs on the Fageol were intact at the finish, due to the patented oiling reservoirs that keep them lubricated perfectly at all times. Sharp turns were made easy and many chucks avoided because of the fact that the stub fender on the Fageol truck keeps the front wheel in the vision of the driver at all times. These free-acting, lubricated springs, together with the compound gear and the stub fenders were the real secrets of the success of the run.



2½-TON FAGEOL TRUCK AT THE 8000-FOOT SUMMIT.



TRUCK GOING THROUGH THE BIG TREE COUNTRY.

One man drove the entire distance without sleep, excepting only three hours on the floor of the truck body some place in the mountains the second night out. The driver, C. L. Butler, of Butler-Veitch, Pacific Coast distributors for the Fageol truck and farm tractor, had the following comments to make:

You can talk aeroplane, race driving, or what you like, but for real excitement give me a truck with speed and some slippery mountain roads. One gets lots more sensation, even though it takes more time. The feeling of five tons of weight in momentum establishes a feeling of "I'm right behind you."

After the start from Oakland, at 8:50 Saturday night, everything was lovely until we reached Dublin and the tule fog. There was nothing in the way of light on the truck but a small gas lamp. We kept the road with the lights of a touring car behind us; but in the fog the reflection was "curtains," so we had the touring car travel ahead of us, and we glued eyes on a small red tail light—and prayed. Thank God! no one was putting in a new culvert. It was quite interesting—"Blind Man's Buff" in the Altamont with the new road work under way. And finally the touring car ahead got out of sight, and a small boy with a flash light then led the way. He walked—the truck followed.

After a long time on a short distance we struck the finished road again and found the car awaiting. We careened madly down the Altamont pavement, around curves, in desperate endeavor to keep that little red spot in sight. But they wanted us to hurry. And so it went, first the red light ahead, and then for a change the car behind with their spotlights lighting the sides of the road, and our shadow a nice black void in front. And a final quick stop always in pleasant anticipation.

There is a piece of road out past Oakdale that the four of us on the truck would like to change. The farmers coming in town wanted a low road—going home they wanted it high—perhaps three feet above—a split road. Along we came without prejudice and entirely hopeful as we stared into the blackness ahead. Perfectly content one minute, in the next we "kissed ourselves good-bye." The right wheel took the upper side, the left the lower—and we to prayer. We had two chances—we could either stop or go ahead. If we stopped, we tipped over, and that ended it. If we went ahead, as far as we know maybe we ran into the river, and maybe we got back on the road. As it happened we kept moving, were never off the road, and didn't tip over—but we had all the sensations.

We entered the real mountain grades at Chinese Camp. Slipping down the muddy grade between there and Jacksonville, with the dense fog still closing us in, was unpleasantly suggestive of funerals. Just one turn straightened out meant "he rests in peace." But we muddled through, and stopped at Jacksonville for a cup of coffee, kindly furnished by an early-rising resident.

Priest Hill, Big Oak Flat, Groveland, and Hamilton rolled by in due time. Things were going so well that it looked like the Valley by noon. Isn't that always the way? So near and yet so far. The farther we went, the longer it took.

Noon found us bucking the steep, muddy grades a foot at a time. The real way to measure a mountain road is from the bottom up, with a sixty-to-one final gear reduction. To get twelve feet ahead—provided there is no slipping back—the motor turns over only sixty times. When one is aiming at a record, this slow stuff leaves his every mental fiber pushing from behind, and a mental push has little effect on a loaded truck.

About this time we had a diversion. Clouds had been gathering during the morning, and soon they began to spill their contents in the form of rain. Ordinarily, rain is no fatal thing. Its absence is possibly more felt than its presence; but it was different with us—no fooling. Just one hour's good rain, followed by a nice snow storm, meant that our Fageol truck would winter in the high Sierras. Into my mind, already a little foggy for want of sleep, came a terrible desire to turn and run for home. Plenty of time, it seemed to me, to deliver that oil into Yosemite Valley next summer, if it must be done. But

places to turn around are few and far between on those mountain grades. It quit raining before we reached a flat, and so we kept on—to final success. How close one sometimes is to failure!

On we crawled across Crane Flat, then up, up, up to the summit over 8000 feet above the sea. It was up here that we met our first snow. We experienced far less difficulty crossing it than we did in negotiating the mere red mud on the grades back by Crocker's.

The sun was getting pretty low, and we had over an hour's drive before the outer mark was reached. Smashing down the mountains with a loaded truck behind in the semi-dark in the cold, clear air of the higher altitudes is exhilarating, to say the least. There is a rock on one side, and a tree on the other some place along that road that should be spread. As we piled down the grade and found stopping out of the question, we thought this task was ours. But we moved neither tree nor rock, and went our way rejoicing.

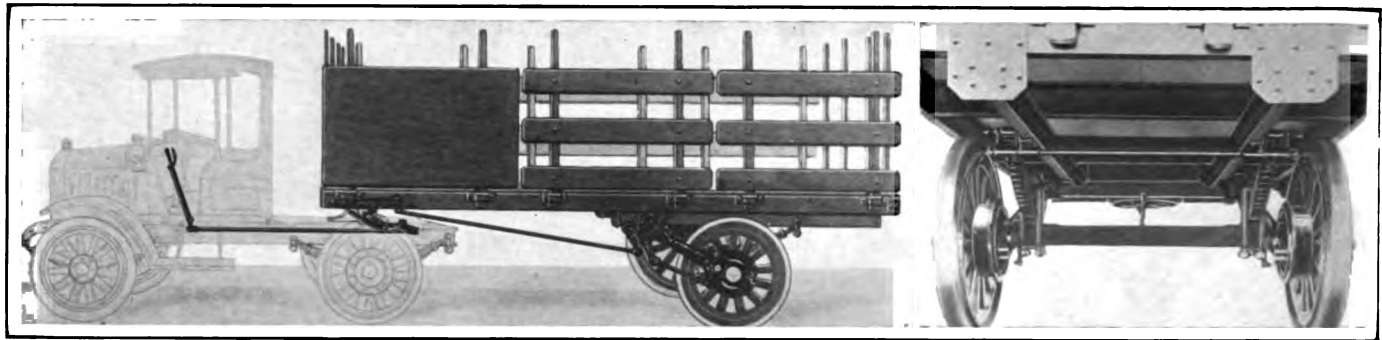
When we reached the top of the Big Oak Flat grade down to the floor of Yosemite Valley, darkness was complete. Our meager light did better by comparison in the mountain night. Nevertheless, it was none too bright, when one considers that just a foot to the right along that entire grade meant a sheer drop of 2000 feet. I suppose one would be just as dead falling from an upstairs porch as from Glacier Point, but the contemplation is far less impressive. Personally, I am certain that I would have been more at ease had I not realized that the blackness just to my right ran on down to the bottom.

But finally we reached the floor of the Valley, and then on to Yosemite Village. We were greeted with considerable surprise, to say the least, by the rangers and natives. It seemed odd to be compelled to pay \$5 for our privilege of driving those mountain roads for two days and two nights, but Uncle Sam plays no favorites. We talked over our roads and the best way out for an hour with the rangers, and found, by the way, that we could have made much better time coming by the Wawona route, which we decided to follow on the return trip.

We reached the Village about 7 o'clock, and a little over an hour later the rangers cheered us on our homeward way. Slowly climbing up that tremendous Wawona grade in the dark after no sleep for 37 hours, was most monotonous. That sort of trip is a wonderful cure for insomnia. As near as I can figure, I was asleep at the wheel from Inspiration Point to Chinquapin, or from nine o'clock to one. Finally my conscience got the better of me. I had had a weird sensation for hours that maybe I had already gone over the grade, and all this thing was in the hereafter. It was too much. I stopped the truck and the four of us held a council of war. We decided to put the two boys out of their bed, while the mechanic and I slept. The boys built themselves a fire a few yards back of the truck. Their bed—now ours—was the hard-wood ironed floor of a well-made truck body. The space allotted was too small for us, but none the less we slept, and soundly, for three hours. For cover we had a blanket, a quilt, and our overcoats. Mountain nights are mighty cold, and we realized this fully. It started to rain as we fell asleep, but evidently soon quit.

It was a wonderful sensation to wake out of that dim past with a clear mind and plenty of chance to drive. From then on we made time. We stopped an hour at Wawona for some bread and coffee, leaving there at 6 o'clock Monday morning. Six hours later we were in Merced without experience worthy of comment other than a slow, slippery, muddy grade from Wawona to the summit, and few less than a million "thank-you-marms" or drain ditches along the road down the Chowchilla grade to Mormon Bar. Two miles beyond we came to the new highway grade to Mariposa, and struck a 30-mile gait for home.

After a lunch at Merced, we started for Oakland at 12:40. Many a touring car driver looked up with surprise as we silently slid past in our fast-going Fageol. We arrived at 6:50 p.m. On our way home the little device that regulates the speed of the motor came to the con-



SIDE VIEW OF THE TRI TON SEMI-TRAILER, SHOWING BRAKING ARRANGEMENT. VIEW OF UNDER-BODY FROM REAR.

clusion that we were traveling too fast, and promptly proceeded to slow down to less than 15 miles an hour. We stopped and fixed it, but only temporarily. From Canyon Inn to Oakland the mechanic sat on the little stub fender and held the governor open with his little finger, so we could continue at the essential speed.

Such little inconveniences as no sleep, no food—or almost that—no windshield and lots of weather, had been overlooked in our one desire to get "over the top," but I must admit that that bed felt good for the minute before I fell asleep.

The total elapsed time for the 440-mile round trip was 46 hours, an average of nearly 10 miles per hour. The actual running time was 38 hours, 15 minutes, an average of about 12 miles per hour. The 220 miles between Wawona and Oakland was covered in 12 hours, 50 minutes, an average of 18 miles per hour.

Melhuish Believes National Truck Show Coming

With motor trucks becoming more and more an essential adjunct of every business, no matter of what character, and in every section of America, William Fulton Melhuish, president of the Fulton Motor Truck Co., Farmingdale, Long Island, believes that a national motor truck show is a necessity. In fact, he believes that there should be two or three motor truck shows located at points easily reached by business men and farmers.

Local shows with their motor truck exhibits, and the success attained by private showings of motor trucks during the National shows, are going to have their effect upon sentiment, and before another year there will be an insistent demand, not only among the manufacturers of motor trucks, but also among business men, that an exhibit of a national character be put on.



CORNER OF ASSEMBLY DEPT., FULTON MOTOR TRUCK CO.,

Farmingdale, L. I., showing some of the hundreds of trucks ready for delivery. The ideal location of the plant near the Long Island camps makes "empties" easy to obtain; water transportation is close at hand, while drive-aways over the good roads are an easy proposition.

Merits of the Tri Ton Semi-Trailer

In these days of the growing use of the motor truck, it behooves the dealer and user to learn how his vehicle may be utilized to greater advantage in the handling of larger loads without injury to its power plant.

It is generally admitted that a motor truck will pull approximately three times what it is able to carry on its own frame, so it would seem that in these times of forced economy it costs money not to take advantage of the full pulling power of the truck.

In the two-wheeled Tri Ton semi-trailer, which can be easily backed up and turned around, and has the close-coupled appearance so pleasing to the eye, positive traction is assured because the fore part of its frame or one-third of its length bears, through a fifth-wheel connection, on the rear axle of the motor truck or tractor. Placing on the rear wheels of this semi-trailer, mechanically operated internal expanding brakes, of the standard motor truck design, controlled from the driver's seat of the motor truck, is a mechanical achievement that has taken months to perfect. The brakes and connections are unaffected by the rocking, turning and irregular shifting actions between the motor truck and semi-trailer by the introduction of a universal joint of original design, placed in the center of the fifth wheel and through the center of which the brakes are actuated without lost motion, regardless of the position of the motor truck or tractor in relation to the semi-trailer.

An interesting detail of construction permits the semi-trailer to be detached from the motor truck or tractor without touching the brake mechanism. The brake rod automatically separates itself when the trailer is detached from the motor truck. The brakes are provided with means for locking the wheels of the Tri Ton semi-trailer when it is detached, permitting loading and unloading while on the steepest hill.

In many lines of business where the loading and unloading operations are lengthy, the semi-trailer effectively reduces the loss of the driver's time and tie-up of the motor truck, as the owner can operate two or more semi-trailers with each motor truck. The semi-trailer can be backed up in nooks and corners that the long wheelbase motor truck has difficulty in negotiating, and lends itself to the efficient handling of bulky loads, as the loading area can be extended or proportioned to carry the maximum weight of the semi-trailer's total rated capacity.

The Tri Ton Corporation is prepared to deliver its semi-trailers in various capacities to be used with motor trucks ranging from $\frac{3}{4}$ to 17 tons capacity. The factory headquarters are located at 250 West 54th Street, New York City.

Establish Trucking Exchange in Detroit

Relief of terminal and warehouse congestion is the object of the establishment of a Detroit trucking exchange by the Packard Motor Car Co. Owners of motor trucks are listed at the exchange and when a company requires the use of an additional truck, it notifies the clearing house and obtains the use of an idle machine. This will help the railroad freight car situation and keep material moving.

The Defiance 1½-Ton Motor Truck

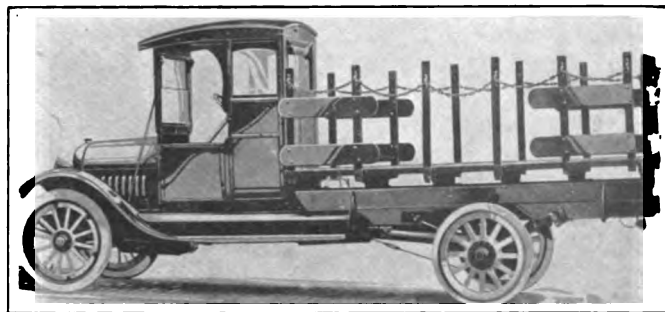
It was recently announced that the Turnbull Wagon Co., had been reorganized upon an extensive scale and was to market a motor truck known as the Turnbull. It has now been decided to call the new truck the Defiance. The new company takes the firm name of The Turnbull Motor Truck and Wagon Co., with truck sales division at Fostoria, Ohio, and factories at Defiance, Ohio. W. O. Allen, general manager of the Allen Motor Co., Fostoria, Ohio, is president and general manager of the Defiance company. The truck concern is distinct from the Allen company, but since many of the same men are interested in both concerns the sales and advertising departments of both will co-operate.

The Turnbull organization has been building heavy-duty vehicles for 41 years and are thorough manufacturers with big facilities. For a time all truck manufacturing facilities will be concentrated on a model of 1½-ton capacity.

The Defiance truck has an exceedingly stout channel steel frame of 5½ inch depth. The wheelbase is 135 inch, with 116 inches from back of cab to rear of frame, and with 44 inch overhang beyond rear axle. Bodies of standard types will be built in the company's own shops, which are finely equipped for this kind of work.

The motor is the Allen, four-cylinder, 3¼x5 inch, L-head type. Ignition is by a high-tension magneto, waterproof type. A Monarch Automatic Governor is standard equipment on the Defiance and will be set to limit speed to 16 miles an hour. The radiator shell is cast, built up and bolted together, an ideal form for truck use, combining strength and accessibility. Grant-Lees transmission with S K F bearings is used and the final drive is by Torbensen internal gear. A three-plate, heavy-type Borg & Beck clutch, made especially for truck service, is used. The springs are semi-elliptic, both front and rear, 42x2¼ inch and 54x2½ inch, respectively. Heavy artillery type wood wheels are used, having fourteen spokes both front and rear. Two sets of brakes, both internal and external, on rear wheel brake drums. Tires are of the pressed-on solid rubber type, 34x3½ inch in front and 34x5 inch in rear. The steering-wheel is located on the left side. A 20-gallon gasoline tank is located under the driver's seat with gravity flow to the carburetor, which is a Stromberg, Model M-1, with hot air stove from manifold, and auxiliary air control on dash.

The chassis includes driver's seat, full crowned fenders, running boards, odometer, three oil lamps, horn, jack and tool kit, and sells for \$1595, f.o.b. Defiance, Ohio.



SIDE VIEW OF THE DEFIANCE 1½-TON MOTOR TRUCK.

Remarkable Short-Haul Work of Maxwell Truck

Twenty and three-tenths miles per gallon of gasoline is the sensational average recently made by a Maxwell one-ton truck, carrying 3,205 pounds of Violet brand shortening, between Los Angeles and San Diego, a distance of 130 miles. The Maxwell carried its load about \$2 a trip cheaper than freight and drayage charges would have been. Time saved and security against freight congestion, however, are even more important factors.

The truck made a series of three round trips to demonstrate the advantage of motor truck transportation over railroad shipment for short hauls, making deliveries in 50 hours and 15 minutes for the three round trips. A total of 19,230 pounds were carried by the truck. On all trips the truck traveled at the rate of about 15½ miles an hour.

Deliveries were made direct to the warehouse, eliminating the extra handling and drayage charges which would have been necessary had the goods been shipped by rail. Shippers consider 200 miles or less a short haul.

Help Uncle Sam Spot the U-Boat

The presence of that sea pest, the U-boat, in the commerce lanes has made it imperatively necessary that the United States Navy have immediately a largely increased supply of binoculars, spy-glasses and telescopes, sextants and chronometers. Heretofore the United States has been obliged to rely almost entirely upon foreign countries for its supply of such articles. These channels of supply are now closed, and as no stock is on hand in this country to meet the present emergency, it has become necessary to appeal to the patriotism of private owners to furnish these "eyes of the navy."

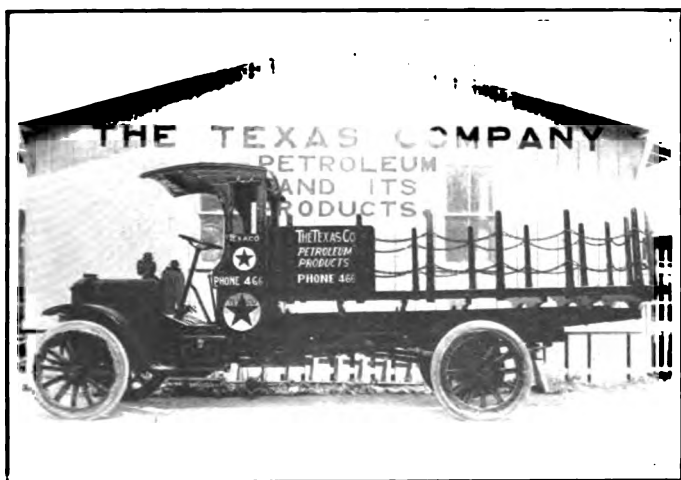
Any "Motor West" reader having any of the articles mentioned, and desiring to help the cause, should immediately send same by mail or express to the Hon. Franklin D. Roosevelt, Assistant Secretary of the Navy, care of Naval Observatory, Washington, D. C. All articles should be securely packed and tagged with the name and address of the donor, in order that they may be acknowledged by the Assistant Secretary.

Articles not suitable for naval use will be returned to the sender. Those accepted will be keyed, so that the name and address of the donor will be permanently recorded at the Navy Department, and every effort will be made to return them, with added historic interest, at the termination of the war. It is, of course impossible to guarantee them against damage or loss.

As the Government cannot, under the law, accept services or material without making some payment therefor, one dollar will be paid for each article accepted, which sum will constitute the rental price, or, in the event of loss, the purchase price, of such article.


Kettering is S. A. E. President

C. F. Kettering, vice-president of the Dayton Engineering Laboratories Co., was recently elected president of the Society of Automotive Engineers. David Beecroft is vice-president, and C. B. Whittlesey, treasurer.



FEDERAL TRUCK WHICH MAKES FIFTY-ONE DELIVERIES DAILY.

Oil distribution was revolutionized overnight. It was only recently that horses hauled the tank wagons. Now demand says: "Prompter delivery"—and the oil companies say: "More trucks." The 1½-ton Federal shown in the photograph is owned by the Texas Petroleum Products Company, Butte, Mont. This truck makes on an average of five trips per day—fifty deliveries, and covers 45 miles. It carries 7½ tons. They get 7 miles per gallon of gas and 35 miles per pint of oil. The average daily cost, including all items, is \$8.10. This is a cost of about 20 cents per mile and \$1.08 per ton.



NORWALK TIRES

KNOWN BY THEIR MILEAGE

Over 100,000 of these casings are giving perfect service in California alone. All State-owned automobiles from Shasta to Tia Juana are equipped with them, many of the biggest corporations are using them exclusively and thousands of motorists select them in preference to all other makes. Norwalk mileage performance tops 'em all.

Adjusted on a basis of 7500 miles for Ford sizes and 6000 miles for larger sizes.

FACTORY DISTRIBUTORS

LICHTENBERGER-FERGUSON CO.

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Northwest Corner Pico and Hope Sts.
Los Angeles

1825 Merced Street
Fresno

OPEN TERRITORY FOR DEALERS STILL AVAILABLE

The New Liberty Roadster

In response to numerous requests, the Liberty Motor Car Co., has produced a two-passenger roadster which has already met with great favor everywhere throughout the Pacific Coast territory. This new Liberty model has a wheelbase of 115 inches, and is built on the standard perfected Liberty chassis. Its trim, modish body lines give an ultra-smart effect, sweeping gracefully as they do from the hood to the rear deck to a tapered, rounded point.

The color scheme of the Liberty roadster is a beautiful shade of bright red for the body, with chassis, fenders and radiator black and straw-colored wheels. The latter are of wood, although wire wheels may be had at an additional

charge of \$100. The car is listed at \$1350 f. o. b. Detroit.

The up-to-date equipment of the Liberty roadster includes Collins curtains on both sides—a feature that will be much appreciated by the practical owner. The compartment in the rear deck, which may be locked, is exceptionally large, and will permit of the storage of traveling bags and other impedimenta for a long trip.

The upholstery is of fine-grained, high-grade leather, straight plaited to avoid the collection of dust. Unusually soft and resilient springs make for traveling comfort even over the roughest roads. There is ample leg-room for the tallest driver, and all controls are conveniently located. The 23-inch-wide doors permit of ingress or egress without the slightest difficulty.



NEW LIBERTY ROADSTER HAS SWEEPING, GRACEFUL LINES.

Magneto Holding Its Own in South America

The simple, reliable magneto appears to be holding its own in Argentina and the country districts of South America. The storage battery is yet a mystery in most sections of the southern continent and service stations are few and widely separated. In Argentina, especially, about 80 per cent of the cars sold go into the "campo," or country. Here under the hard service the cars receive, the battery is a ready source of trouble. Argentina dealers are therefore specifying magneto ignition on imported cars and American exporters are finding it advisable to comply, as regards car exports to the South American market at least.

Washington's Birthday Race for Santa Maria

Racing devotees in the Santa Maria, Cal., district, the scene of previous exploits of the well-known Milac car and Monty Huyck's geared-up Ford, will have another chance to watch these cars in rivalry on the local track in a program dated for Washington's Birthday. Loughhead's Oakland Six will probably be another contender.

Selden Trucks

Massive construction—colossal strength—gigantic motive power—abundant speed in operation—proven power of endurance, with sufficient energy in reserve—these are the in-built qualities of SELDEN TRUCKS that give them the vitality to render continuous, profitable service to the user—uninterrupted service at low upkeep cost—the kind of service that brings repeat orders.

Three-quarter to Five Ton Models

WORM & INTERNAL DRIVE



Dealers: *There never was a time when a Selden agency was so valuable a possession to a dealer as it is to-day. All Selden dealers are doing a profitable business and building a reputation. Territory is being closed up fast. If Selden Trucks are not being sold in your territory, write at once for our proposition.*

Selden Truck Sales Company

Rochester, N. Y., U. S. A.

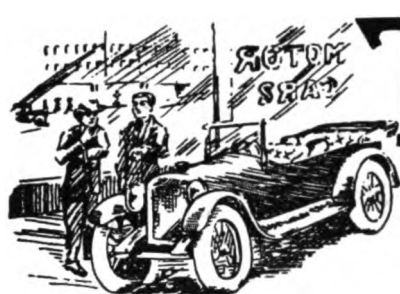
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San Francisco, Cal.

HARTMANN MOTOR SALES AGENCY
1052 Geary Street
San Francisco, Cal.



MCCARTHY



Trade Briefs and Factory Gossip

Shipments Do Not Worry Fulton.

Superior shipping facilities were sought by President William Fulton Melhuish, of the Fulton Motor Truck Co. when that organization located its plant at Farmingdale, Long Island, within less than 20 miles of New York City. Freight conditions throughout America and especially in the East, brought on by the war, have demonstrated that the company chose its location wisely, as during all of the present stress it has been able to secure transportation for its trucks to every section of America. Due to the location on Long Island of large cantonments to which great quantities of supplies are shipped, leaving empty freight cars in ever-increasing numbers, the company has been able to secure cars at all times and as rapidly as wanted. Located on splendid roads, the company is able to hurry shipments forward and avoid delays in passing through New York by driveaways of the trucks to such cities as Albany and to Newark and other New Jersey points. Wharves are reached easily for boat shipments to every part of the world.

* * *

Empire Delivery Unimpeded by Fire.

The fire which destroyed the Industrial Building in Indianapolis on Sunday night, January 13th, entailing a loss of some \$2,000,000, destroyed about three hundred finished Empire passenger automobiles which were stored in the building. This loss is fully covered by insurance and in no way hampers the production of Empire cars. The Empire Co. has doubled its factory force and beginning January 14th, the production schedule was increased to such an extent that there will be no delay in making shipments of cars. There will be no interruption in Empire production on account of this fire and dealers will receive their full quotas of cars without any delay.

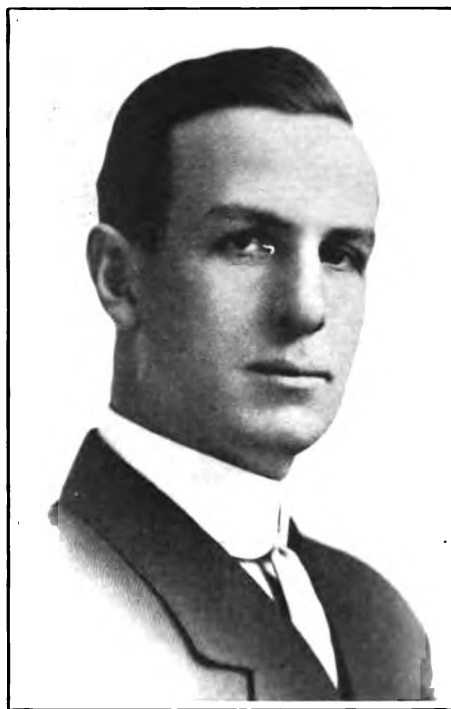
* * *

Jackson Co. Has Large War Contract.

The Jackson Automobile Co., Jackson, Mich., will receive a large share of the contracts amounting to \$4,000,000 awarded to Jackson firms for the manufacture of shell casings for the United States government. The government contracts will also result in the reopening of the plant of the Mutual Motors Co., which recently closed. Thirteen companies located in Jackson, Mich., have been given government contracts, the largest individual one being recently closed with the Hayes Wheel Co., in excess of \$3,000,000.

Bamford Fulton Production Mgr.

Walter Bamford, a graduate of the Olds company, has been appointed production manager of the Fulton Motor Truck Co. at Farmingdale, Long Island. Mr. Bamford was formerly connected with the Detroit Motor Car Co. of Detroit. He has become a resident of Farmingdale and has jumped the production of the company within a short time to a degree that has enabled it to better take care of the rapidly increasing demand for trucks from every part of America.



W. LEDYARD MITCHELL,
New President Maxwell Sales Corp., Detroit.

Kelly-Springfield Tire Dividend.

The Kelly-Springfield Tire Co., Cleveland, O., has declared the regular quarterly dividend on common stock, payable February 1. The dividend consists of the regular \$1 a share payable to stockholders of record on Jan. 15.

* * *

Kellogg Mfg. Co. Head Retires.

George W. Kellogg, president of the Kellogg Mfg. Co., of Rochester, N. Y., has disposed of his interest in the company and retired from its affairs. The duties of president are now being fulfilled by M. R. Anstice. J. F. Weller is vice-president and treasurer, and Josiah Anstice, secretary.

General Motors Profits \$12,900,000.

The General Motors Corp., accumulated undivided profits of \$12,900,000 for the four months' period ended Nov. 30, 1917. This represents, roughly, earnings of 15 per cent on the corporation's common stock outstanding. During the period the company sold 72,923 cars and trucks, for which the net sales return was \$74,868,000. The number of cars and trucks sold showed an increase of 20,055 over the figures for the same period of the preceding year, when 52,868 were sold. At the same time, net sales for the four months were \$26,484,003 greater than those for the same period of 1916, when they amounted to \$48,383,997. The gain in undivided profits in the same two periods was \$3,906,367, an increase of more than 40 per cent over the period ended Nov., 1916.

* * *

U. S. Rubber Declares Dividend.

The U. S. Rubber Co., which includes the United States Tire Co. as a subsidiary company, recently declared a dividend of 2 per cent on its preferred stock. The dividend, which is the regular quarterly dividend declared by the company, is payable Jan. 31 to stockholders of record Jan. 15.

* * *

Barrett With Phila. Storage Battery.

The Philadelphia Storage Battery Co. has secured the services of G. L. Barrett as manager of the Southwestern Division and he will be located at 2605 Locust Street in the Coliseum Building, St. Louis, Mo. Mr. Barrett was formerly president and general manager of the Willard Storage Battery Co., of Texas and has been located in Texas for two and a half years handling the southwestern distribution of Willard Storage Batteries.

* * *

Mitchell Elects Directors.

The Mitchell Motors Co., of Racine, Wis., recently elected directors for the new year. As the directorate now stands it is composed of D. C. Durland, R. C. Rueschaw, R. C. Schaffner, Moritz Rosenthal, R. M. Owen, H. J. Halle and A. P. Warner.

* * *

Benjamin Heads Saxon Sales.

H. S. Benjamin has been appointed sales manager of the Saxon Motor Car Corp., of Detroit. He was formerly connected with the National Cash Register Co., for whom he was a star salesman. In his new position he will have charge of the aggressive sales campaign planned by the Saxon company.

DRIDEK—With the Leather Finish



DRIDEK with its leather finish, is an entirely new creation, based on many years' experience in furnishing tops and upholstery for the majority of the cars that have been put on the market.

DRIDEK looks as well as the best of leather. The distinguishing features in the wear of DrideK are: that you cannot scratch the finish; that it retains its color until entirely worn out; and that it is absolutely waterproof.

The product is unquestionably superior, and the price is within the reach of your specifications. Made in black and many attractive colors.

Send for samples and price list.

L. J. MUTTY COMPANY
BOSTON, MASS.

SCOVEL IRON STORE COMPANY, *Pacific Coast Agents*
SAN FRANCISCO and LOS ANGELES, CAL.

SKF's at K. C. Tractor Show.

At the Kansas City Tractor Show, February 11-16 the SKF Ball Bearing Co. will exhibit its radial and thrust ball bearings, as applied to tractors. Models have been prepared to show the bearings in motion and to bring out their exclusive features. The SKF exhibit will be in charge of Robert C. Bylor, assistant advertising manager. Other SKF representatives in attendance will be S. B. Taylor, vice-president; C. R. Mabley, manager of the Automobile department; and J. B. Castino, F. J. Rider, J. C. Long, C. C. Walsh, A. J. Gillespie, sales engineers.

* * *

Marsh, Elgin Scout, Enters Army.

Continuance of the scouting trip of the Elgin-Six National All Trails Scout car is a question of securing the right man for the command of the car. The Elgin-Six, with Roy S. Marsh as scout master, brought fame to the Elgin Motor Car Corporation and its product through the success attained in making the trip of over 6,000 miles with every part sealed. Mr. Marsh has entered the army, and if the work is to be followed up, a capable substitute for him will have to be found.

* * *

Collins Resigns From Jones Co.

R. D. Collins, vice-president of the Jones Motor Car Co., of Wichita, Kan., for the past 14 months, has resigned from the company and will be succeeded by a man well known in the financial world. Mr. Collins' retirement from the Jones Co. will not disrupt the company's plans in any way, as the move has been in contemplation for some time.

Acme Truck Sales Conference.

The general factory representative of the Acme Motor Truck Co., Cadillac, Mich., gathered at the factory last month for the annual Acme sales conference. Representatives from all over the United States were in attendance. The daily sessions presided over by W. A. Kysor president and general manager and C. J. Helm, sales manager, were devoted to the exchange of ideas centering about the "proved unit" idea of the Acme. Acme sales features, improvements, and the Acme outlook for 1918 were discussed. Included in the list of manufacturers represented were the Timken-Detroit Axle Co., by W. H. Nash; the Continental Motors Corporation by J. G. Painter; the Ross Tool & Gear Co., by S. L. Bradley, and the B. F. Goodrich Co., by P. Oppen. Of importance to the Acme representatives was the 300 per cent increase in Acme production during the year 1917. Quotas were established among the representatives calling for more than double the number of trucks manufactured in 1917.

* * *

Will Assist Cassidy Co. Head.

Gregory Flynn has been appointed assistant to the president of the Edward A. Cassidy Co., of New York City. For the past seven years he has been sales manager for the Rajah Auto Supply Co., of Bloomfield, N. J.

* * *

Chamberlain With U. S. Truck Co.

Announcement is made by the United States Motor Truck Co., Cincinnati, O., of the appointment of C. B. Chamberlain, formerly of the Gramm-Bernstein Co., of Lima, O., as general purchasing agent.

Parke Elected Olympian President.

Fred K. Parke has been elected president of the Olympian Motors Co., the new title being an addition to that of general manager, in which capacity he joined the company last summer. Other officers elected at the annual directors' meeting were William Passmore, vice-president and treasurer; C. E. Callender, secretary; L. P. Helm, production manager; and St. Clair Couzens, director of sales and advertising.

* * *

Bosch Magneto Co. Sales Conference.

The annual sales conference of the Bosch Magneto Co., has just been concluded. Daily sessions were held at the executive offices in New York City, and both main office and branch executives were highly optimistic concerning the outlook, especially in view of the present excellent position of the factory in the matters of labor and material. F. D. Norman, superintendent, outlined the present favorable conditions obtaining at the works.

* * *

Heads Retail Overland in Denver.

C. A. Tarbel has been appointed retail sales manager for the Willys-Overland Co., Inc., Denver, Colo. During the past eight years he has been advertising and sales manager of the May company, a leading clothing store in Denver.

* * *

Will Cover West for Splitdorf.

W. J. McIntyre has been appointed factory engineering representative by Splitdorf Electrical Co., Newark, N. J., and will travel in the Western territory. He has been connected with the Splitdorf engineering sales forces for a long time.



TWO VIEWS OF THE NEW ASSEMBLY DEPARTMENT OF THE WISCONSIN MOTOR MFG. CO., MILWAUKEE, WIS.

With the increase in capital stock to \$1,000,000, the Wisconsin Motor Mfg. Co., Milwaukee, announces the completion of a large addition to its plant used mainly for the assembling of motors. This addition includes a sub-assembly and final assembly department, in addition to a shipping department and stock room. Total floor space is 43,520 square feet. The assembly departments have a floor space of 28,003 square feet. The old assembly department has been converted into a machine shop. Also a brass foundry having 3,000 square feet of floor space has recently been erected by the company. These new buildings quadruple the capacity of the plant. They are modern in every way—well lighted and well ventilated and fitted out with the most modern equipment.

A monorail system has been installed in the final assembly department. The motors are picked up from the assembly stands with electric hoists and conveyed direct to the testing department. This department, which is a recent addition, is electrically equipped throughout. Each test stand has an individual electric motor-generator unit. When a motor has been completed in the assembly room, it goes to the test room where it is run in with electric power until it is sufficiently free to run under its own power. After this it is run under full load for several hours. Then it is hoisted by an electric crane of the monorail type and taken to the final inspecting room. Here the motor is completely disassembled and all moving parts are thoroughly inspected and adjusted. Again the motor is placed on the test stand and is run several hours, after which it is ready to be shipped.

In addition to other improvements, a new sprinkler system has been installed throughout the plant. Also a new power plant with 300 K. W. generator has been completed. A large new office building is now being planned.



**7/8 in.
Regular
for
Maxwells
AC
Titan**

Maxwell Owners

Does your motor always hit on four?

Do not blame your carburetor, or your ignition system, or your valves if your motor does not perform as it did at first, *but look to your spark plugs.*

A set of *AC Titan* plugs will make your car run more smoothly than it ever did because it delivers the *entire* spark instead of losing most of it through the insulation.

AC SPARK PLUGS

The Standard Spark Plug of America

Champion Ignition Company
Sole Manufacturers Flint, Michigan

HERZ PLUGS

"Bogie Mercedes"

LAW OFFICES
PREBLE, McAULAY & MEIGS
FIRST NAT'L BANK BLDG.,
NORTH YAKIMA, WASH.

E. B. Preble
Geo. F. McAulay
Leonard O. Meigs

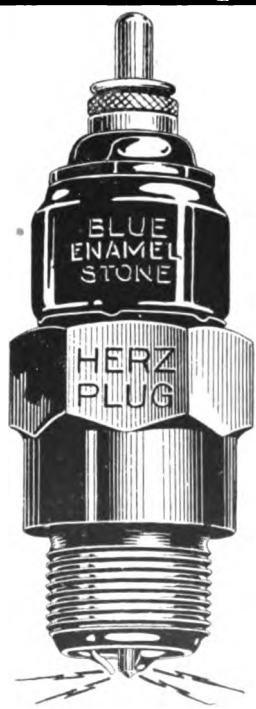
Herz & Co.,
245 W. 55th St., New York.

Gentlemen: I own a 4-cyl. 7-passenger, 1914 model, 45 h.p. White automobile which has been in continuous operation since it was turned out of the factory and which still has in it a set of Herz Plugs that came in the machine. I expect to run the car another ten years and realizing that an accident may happen to the plugs any time, I want to have a couple of your plugs on hand for use in emergencies. I tried to buy them at a local dealer's and was told that they were no longer obtainable in this country, and it was only while reading the "Literary Digest" today that I ran across your advertisement.

I would like you to send me a couple of the plugs to fit the car above mentioned, sending me a bill for the same. I will remit promptly upon receipt of them.

Yours very truly,

(Signed) LEONARD O. MEIGS.



HERZ & CO., 245 W. 55th St., New York

Number 102, the Sunset Limited, is a fast train

—Leaves Los Angeles at 8:30 every morning, arrives New Orleans in 57 hours and 30 minutes—only two nights on the road. Connection with fast train at New Orleans for New York makes the journey only four nights from here to New York. Also connects with Southern Pacific steamers for New York and carries through tourist sleeper daily to Washington, D. C.

The SUNSET EXPRESS, another good train, leaves at 3:30 p.m. daily

SOUTHERN PACIFIC

Ticket Offices

212 West Seventh Street
606 South Spring Street

Pacific Electric Bldg., Main Lobby
Station — Central Avenue at Fifth Street
Phones: 60641; Pico 2000 — Day or Night

See the Apache Trail



Rear View of Williams Spotlight

...THE...

Williams Spotlight

TWO SIZES (6 AND 7 INCHES)

Model A, \$9.00

Model B, \$10.00

Has adjustable control to comply with requirements of the lighting laws of all States. May be used for either left or right side of windshield.

Detachable for Trouble Lamp or for lighting camp at night. Has inclosed dust-proof and water-proof switch.

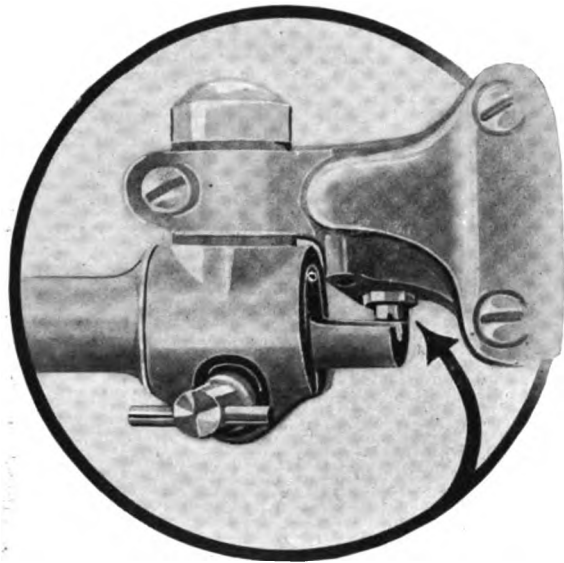
We sell through jobbers only, and are represented on the Pacific Slope by

HUGHSON & MERTON, Inc.
Los Angeles, San Francisco, Portland and Seattle

MANUFACTURED BY
WILLIAMS MFG. CO.

310 North Flower Street

SANTA ANA, CAL.



Detail of Adjustable Control Feature of Williams Spotlight

Use Motor West

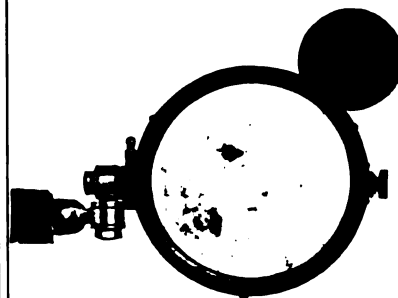
¶ Every Eastern automobile or accessory manufacturer can help his Pacific Coast representative increase his sales by a liberal use of the advertising columns of MOTOR WEST.

¶ Coast dealers and factory representatives should insist on the factory folks giving them the same advertising support in "The Motoring Authority of the Pacific Coast" as is accorded the Eastern and Middle Western dealers and representatives in the motor trade journals published in those sections. Otherwise the dealers and representatives here, who pay their proportionate share of the expense of advertising in the Eastern and Middle Western journals (and incidentally receiving very little benefit from it) are paying for something they do not get.

THINK IT OVER!

"The Light That Shows the Road"

SAFETY FIRST—BUY AN S & M



Complies with the California State Law without interfering with its usefulness in reading house numbers, road signs, etc. For sale by all Jobbers and Dealers of Automobile Accessories.

25413

S & M LAMP CO.

117 West 38th Place
LOS ANGELES

OLYMPIAN

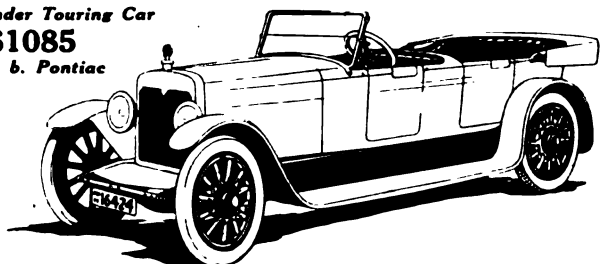
One Hundred Percent Car

Write for dealer proposition

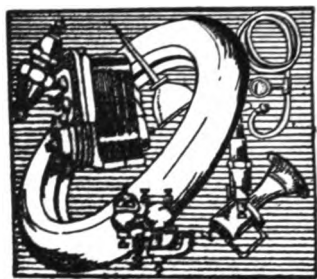
4-Cylinder Touring Car

\$1085

f. o. b. Pontiac



OLYMPIAN MOTORS COMPANY, Pontiac, Mich.



UTILITY HEATER IS ORNAMENTAL FOOT RAIL.

The Utility Protected Heater avoids the danger of burning shoes, clothes or wraps in the car, which is frequently present in the ordinary car heater and which offsets the comfort gained by warming the car in cold weather by utilizing the heat from



UTILITY HEATER ATTACHED TO EXHAUST

the gases leaving the engine. A convenient valve regulates the heat, shutting it completely off as in the summer season, and during cold weather making it possible to secure just the satisfactory degree of heat in the car. In appearance it is an ornamental foot rail which radiates heat and takes up no extra room in the car. The Utility Protected Heater fits all cars and is sold, complete, for \$15. The Utility Junior Heater, a smaller size for Ford cars, is sold, complete, for \$7.50. They are manufactured by the Hill Pump Valve Co., Chicago, Ill.

KELLOGG ENGINE-DRIVEN TIRE PUMPS.

Modern automobile equipment that does not include a mechanical tire pump is an anachronism. All first-class cars have, or should have, these handy, compact labor-savers. As a matter of fact, there are now at least two-score cars whose standard equipment includes a Kellogg engine-driven tire pump. It is worthy of men-

tion that in 90 per cent of the cases where manufacturers include an engine-driven tire pump in the regular equipment of their cars, Kellogg pumps are the ones specified. These handy and comparatively inexpensive devices are made by the Kellogg Mfg. Co., Rochester, N. Y., and whether driven from the transmission, the front end of the crank shaft, or from any other portion of the motor, are dependable and ready for use at all times.

Kellogg pumps are so designed that they cannot spray oil with the air, and yet all moving parts are plentifully supplied with lubrication. To give an idea of the care with which the parts of Kellogg pumps are made, cylinders, pistons and drop-forged crankshafts are ground to size within limits of one-half of one-thousandth of an inch. Pistons are fitted with special air-tight rings, and both intake and exhaust valves are of the poppet type, insuring maximum efficiency.

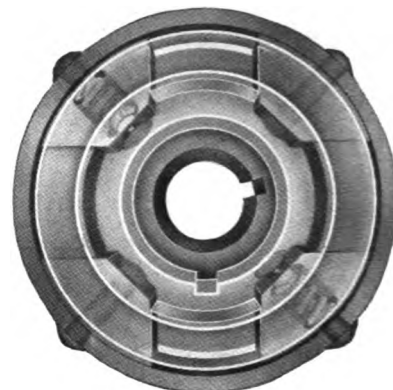
The illustrations show some methods of installing the Kellogg pumps. The Ford type, which is also suitable for the Chevrolet, costs \$13 complete, and may be attached in 20 minutes without interfering with the starting system or removing the radiator. On the Chevrolet the pump is bolted to the electric starter bracket. The crankshaft drive type which is specially suited for Overland Models 75 and 90 Country Club and all Dodge models, is listed at the same price. Equipment for larger cars, complete, costs \$16.50, and with each pump come diagrams and full instructions for installing, so that in many cases the owner himself, if he have a little mechanical ingenuity, can do the work.

COLUMBUS VARNISH CO. FREE WINDOW SETS.

The Columbus Varnish Co. announces to the trade that its 1918 window display material containing six pieces to the set, such as signs, hangers and streamers, are now ready for distribution to accessory jobbers, dealers and garages as well as hardware stores carrying automobile accessories. Dealers carrying Peerless Automobile Specialties and not having received this material should write at once for this set; it is free to all.

RAYFIELD COUPLING FOR MAGNETO, GENERATOR AND PUMP DRIVE.

The Rayfield Coupling is the latest product of the Geo. D. Bailey Co., 1120 S. Michigan Ave., manufacturers of Bailey Ball Thrust Bearings, which replace plain thrust washers at the left (gear) side of the Ford car or Chevrolet 490 differential.

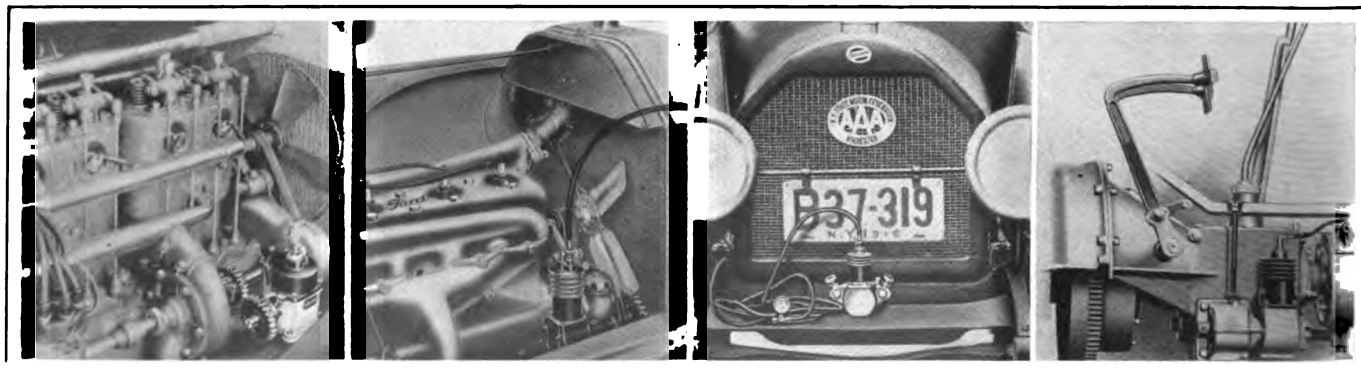


BAILEY'S RAYFIELD COUPLING.

This Coupling is adaptable to all magneto, generator or pump shaft drives and is similar in construction to the Oldham type, except that it has an automatic spring take-up for wear and to prevent noise. About twenty-five of the largest motor car, truck and automobile engine manufacturers have been testing the Rayfield Coupling for several months with satisfactory results in every case. One thirty-second of an inch is allowed for, but many tests covering from 25,000 to 30,000 miles have shown a wear of less than .005.

AN UNIQUE ACCESSORY FOR ALL CARS.

The Metal Specialties Mfg. Co., 338-52 North Kedzie Ave., Chicago, has placed on the market the 3P Double Outlet Y Plug Socket for automobile dashboards. This article has already demonstrated its usefulness and merits to many automobile owners. Unlike the straight plug socket, the little member of the well known Presto accessory family is made in a Y



SOME TYPES OF KELLOGG ENGINE-DRIVEN TIRE PUMPS—(Left to right) Typical motor installation; motor drive for Ford and Chevrolet; shaft drive for Overland and Dodge; typical transmission installation.



HOTEL ST. FRANCIS San Francisco

Center of the City's Life and Color

EUROPEAN PLAN FROM \$2.00

Management - James Woods

DUPLIX

THE ORIGINAL 4-WHEEL DRIVE TRUCK

**Speeding up
the Nation's Transportation**

Present conditions offer a big opportunity to Duplex dealers because the Duplex has thoroughly demonstrated its practicability for overland delivery of freight.

The Duplex is solving the freight question throughout the country by giving dependable, never-faltering service—reducing transportation costs and eliminating delays. Our production has been trebled and an opportunity is offered established dealers to become distributors for the Duplex in several localities. Write for our dealer proposition and the heavy haulers' magazine, "Duplex Doings."

Address all communications to Dept. 102.

Duplex Truck Company
LANSING, MICHIGAN



"The gasoline of quality"---real gasoline---has a continuous chain of boiling points.

Standard Oil Company
(California)



real gasoline

8TB

Stop Rear Axle Trouble

8TB



Every Bailey Ball Thrust Bearing Guaranteed.

BY
INSTALLING
THE

BAILEY BALL THRUST

At Left (Gear Side) of Ford and Chevrolet 490 Differentials
TO REPLACE FLAT THRUST WASHER

Rear axle breaks and difficulties are caused chiefly by the flat thrust washers at left (gear side) of differential wearing thin and causing drive and pinion gears to get out of mesh. These flat washers, having but a sliding contact, cannot help but wear thin—creating great loss of power and wear and tear on entire car.

But the BAILEY BALL THRUST BEARING made of carefully heat treated materials and containing eighteen 1/4-inch highest type balls, cannot wear thin, hence they keep gears in proper mesh, make them run smoothly and last indefinitely.

The Bailey bearing, by reason of the things it does, reduces friction in gears, consequently conserves power. Having a capacity for six times the maximum thrust, every bearing bears an unqualified guarantee that it will "stand up" under all conditions and hardships.

Dealers, repairmen and garagemen quickly recognized the advantages of a bearing of this type, and the profitable replacement business, as well as added prestige by installing Bailey Ball Thrust bearings.

Those not already carrying the Bailey in stock will promote their own interests by communicating with any Coast jobber for further details.

Sold through dealers and jobbers only. List price, \$3.75.

GEO. D. BAILEY CO.

8TB

1116 S. Michigan Avenue

Chicago, Ill.

8TB



An Exact Replacement Fits to a 1000th part of an inch

shape. This shape converts a single outlet into a double outlet. By using this Y plug socket the owner uses his single dash lamp socket for two purposes at the same time; for example, one side of the plug may be used for spotlight and the other side either for an inspection lamp, regular dash lamp or cigar lighter.



NEW Y PLUG SOCKET AND PLUG.

The Presto Y plug has a Standard Edison type plug connection on one end which can be plugged into any dash lamp socket on the dashboard of an automobile. The Y plug is neat and ornamental, with the exposed parts handsomely nickel-plated. It is made in three styles,—double contact, single contact, and double to single contact.

FEBRUARY 15TH ISSUE OF
MOTOR WEST
will be the
"PACIFIC SHOW NUMBER"

DEFENDER LOCK PROTECTS FORD COIL BOX AND CAR.

Every automobile thief knows that if he can open the coil box of a Ford car that he can start the engine without a key, even though the ignition be locked. He realizes, too, that if the coil box is locked and a positive circuit-breaking lock is used, the car cannot be started or the coils stolen. The Defender Auto Lock, manufactured by the Defender Auto Lock Co., Marquette Bldg., Detroit, Mich., locks the coil box in such a manner that it cannot be tampered with and at the same time does not change equipment, ignition or wiring in any way. The Defender key gives easy access to the coil box for adjusting the vibrators and the lock cannot be broken with a hammer. It is equipped with an intercepting switch blade which guarantees against starting the engine in any manner while the key is removed from the lock. Using a screw driver, anyone can install the Defender Lock in less than ten minutes. The price is \$3.50.

ADVANCE CORK INSERT TRANSMISSION LININGS FOR FORDS.

Advance Cork Insert Transmission Linings were originated to make the planetary transmission of the Ford car easier and more efficient in operation by doing away with the slipping, jarring and chattering of the Ford when the brake is applied and when either low or reverse speed is put on. The direct cause of this condition, which most Ford users endure as being a natural evil of their cars, comes from slippery transmission linings. They get as hard and polished as strips of steel and fail to grip when pressure is exerted on the control pedals. The Cork

Insert Linings stop the rattle by stopping the slipping. The round pieces of cork inserted in the imported fabric are claimed to grip and hold at the slightest pressure. The corks are somewhat thicker than the fabric itself and protrude beyond it, making the first contact with the transmission drums. Claimed records of 40,000 and



CORK INSERT TRANSMISSION LINING.

50,000 miles with Cork Transmission Linings are covered by affidavits sworn to by the manufacturers, the Advance Automobile Accessories Corp., of Chicago. They are sold at \$3 per set of three. Another Ford accessory produced by the same company is the Advance Cork Insert Fan Belt. Here the cork inserts perform the same function as in the transmission linings—they stop the slipping caused by the fan belt becoming oil and water-soaked and dirt and dust-laden. The Fan Belt is sold at \$1 for 1917 Ford cars and at 85 cents for earlier models.

LANE'S "H-C" JACK

Easily Operated. You Keep Clean.
Absolutely Dependable.

HANDLE IS JOINTED IN THE MIDDLE FOR
STORING AWAY



PLACED
OPERATED
REVERSED

by one hand from end of handle

No. 14, Lifts 1800 lbs. \$4.50

No. 16, Lifts 3000 lbs. \$6.00

At All Supply Stores, or Prepaid to You
Upon Receipt of Price

LANE BROS. CO., - POUGHKEEPSIE, N. Y.

PHONE:
Main 4062



PHONE:
A-4062

AUTO AND TRUCK
SPRINGS

WHEELS, BUMPERS
FORGINGS

Wholesale

Retail

UNITED STATES SPRING CO., Inc.

Successors to A. & F. SPRING CO.,
1120-22 South Los Angeles Street, LOS ANGELES.

A P E X

Motor Oils

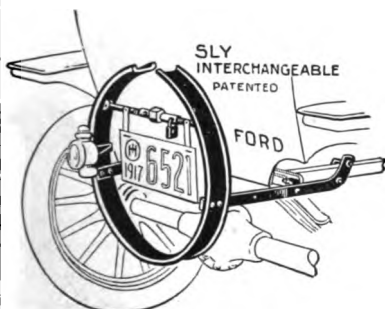
THE HIGHEST POINT OF EFFICIENCY

Gasoline "with the Punch"

PUENTE OIL CO.

Oldest Refiners and Producers on the Coast

BE UP-TO-DATE ON TIRE CARRIERS



The strap kinds are obsolete and unsightly. The Sly interchangeable—Ford or Chevrolet quickly—neatly does the trick—take any casing or demountable—cost no more. Beware of imitations. If your Jobber doesn't list, write us for complete catalogue—of real Carriers and "Better Springs."

NEW ERA SPRING & SPECIALTY CO.

1190 Hamilton Ave.,
Grand Rapids, Mich.

MORE POWER --- LESS FUEL



SU-DIG SERIES PLUGS are the only spark plugs that produce **TWO SIMULTANEOUS SPARKS** in each cylinder when connected with the ordinary plug. The two opposed sparks ignite the mixture at two points at once. This burns the gas more than **TWICE AS FAST**, resulting in a wonderful **INCREASE IN POWER** and **GASOLINE MILEAGE**, and **WITHOUT ANY CHANGE IN THE PRESENT EQUIPMENT.**

Free booklet, "How to Get More Power." Write for it. Please mention car.

CHANSLOB & LYON CO.,

San Francisco, Los Angeles, Fresno, Oakland,
Seattle, Portland.

WEINSTOCK, NICHOLS & CO.,

San Francisco, Los Angeles, Oakland.

SUPERIOR MOTOR POWER CO.,

38 Irving Place

New York

CUSHIONS YOUR CAR ON AIR—THE GRÜSS AIR SPRING

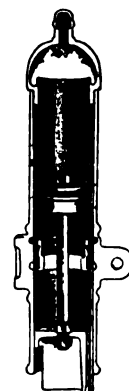


1918 HUDSON SUPER-SIX EQUIPPED WITH GRÜSS AIR SPRINGS
THE LUXURY SHOCK ABSORBER

Speed you may have, with comfort and safety and without racking wear. The million hammered road shock beats upon elastic air and spares nerves, tire fabric, chassis and engine, when the car is Grüss equipped. The tire saving alone to the heavy car is startling—a full half. The Grüss lends economy to luxury.

CARTER & VANBERG
SERVICE STATION

775 Towne Ave. Broadway 8306 Los Angeles

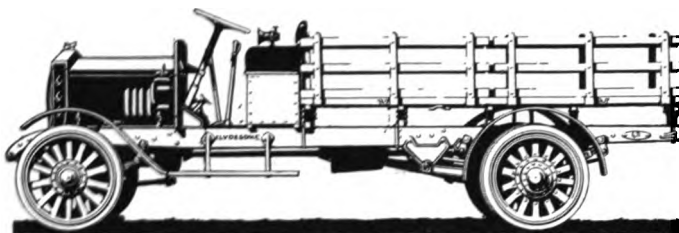


CLYDESDALE



Motor Trucks of $\frac{3}{4}$ Ton to 5 Ton Capacity

THE CLYDE CARS CO., Clyde, Ohio



PISTON SERVICE



Light Weight, Any Make

Cast Iron Pistons

Are the BEST by TEST

FINISHED

SEMI-FINISHED

or ROUGH

LARGEST PRODUCERS IN THE WEST

H. JAHNS AUTO MACHINE WORKS

912 West Pico St.

Los Angeles, Cal.

WESTERN TRADE NOTES

Los Angeles, Cal.—The Oldfield Tire Co., capital \$51,000, has been incorporated by Barney Oldfield, R. R. Colby and Frank L. Chance.—The Motor Car Supply Co. will concentrate all its business in the new South Broadway store, abandoning the Spring street quarters where it has been located for the past ten years.—The business of the Forsythe Tire Service Co., 1211 S. Hope St., has been purchased by the Oldfield Tire Co.—Robert C. Manning has been appointed manager of the used car department of the Leach Motor Car Co.—The I. A. Miller Top Co. has leased quarters at 1026 S. Grand Ave.—Smith & Conley, tire vulcanizers, have located at the southeast corner of Main and Pico.—Motor Car Equipment Repairs Co. has moved into larger quarters at 1246 S. Los Angeles St.—The renewed-car department of Don Lee, Cadillac dealer, has been expanded by the leasing of quarters at 1046 S. Olive St., in addition to the company's main quarters at 1218 S. Main St.—The Morgan-Sharp Sales Co. has opened quarters at 1002 S. Hill St. to act as sales agent for Perry automobile locks.—George T. Giesebell, president and general manager of the Tire Construction Co., Pico and Olive Sts., has taken the agency for Braender Bulldog tires.—The Pacific Tire & Rubber Co., formerly of 611 South Olive St., has moved to 952 South Broadway.—The United States Auto Supply Co. has leased salesrooms at 609-11 S. Olive St.—The American-LaFrance Fire Engine Co. has located at 929 S. Hill St.—Earle C. Anthony has leased a store-room at 1510-22 W. Washington St., wherein to store Packard and Reo cars.—W. C. McMullen will open an automobile paint shop in a new one-story brick building now being erected at 1215-17 S. Los Angeles St.

* * *

El Centro, Cal.—J. Harclerod will handle the Buick here.

* * *

Sacramento, Cal.—Rice & Forrest have been appointed Hupmobile agents.

* * *

Ferndale, Cal.—Hermanson & Green, county agents for the Maxwell, have opened a branch salesroom here.

* * *

Santa Barbara, Cal.—M. A. Durkee, Cadillac and Nash dealer, has occupied his new building, erected at a cost of \$30,000.

* * *

Long Beach, Cal.—C. B. Bellows, of the Ocean View Garage, Dodge car agent, has added the Columbia Six car line.

* * *

Stockton, Cal.—The Imperial Garage, owned by Maringo Bros. & Fields, has been appointed Bethlehem truck agency for San Joaquin, Amador, Calaveras and Tuolumne counties.—B. W. Dixon has taken the San Joaquin county agency for the Briscoe car and Vim truck.

* * *

San Francisco, Cal.—F. P. Trask has opened a service station on Van Ness Ave., to give service on Gates Half-Sole tires.

* * *

Lewiston, Mont.—The Winifred Motor Co., capital \$15,000, has been incorporated by L. C. Porter, O. Ashbjornsen, Russell Hague, J. H. Hendricks and A. G. Vielleaux.

* * *

Tucson, Ariz.—Local dealers here recently met and formed the Tucson Automobile Dealers' Association.—The Republic truck agency has been added by the Southern Arizona Motor Co.

PHILADELPHIA
DIAMOND
GRID
BATTERY

The Best of Batteries

There may still be an opportunity to obtain selling rights in your territory if you act quickly.

Philadelphia Storage Battery Co.
BRANCHES:
1105-7-9 W. Pico St., Los Angeles, Cal.
37 Spear St., San Francisco.

40% Longer Life




THE FULTON TRUCK

1½ Ton Capacity

Has created the world's standard in motor truck value

If you are interested in a real money making agency where selling resistance has been reduced to a minimum, communicate with us NOW.

Fulton Motor Truck Co., Farmingdale, L. I., N. Y.



DENBY
MOTOR TRUCKS

Pioneers of the internal-gear drive

Denby trucks are built in 1, 2 and 3 ton capacities, and with bodies for every line

DENBY MOTOR TRUCK COMPANY
DEPT. H. Detroit, Michigan

GMC
TRUCKS

Every practical size of truck for every trucking need. GMC Trucks represent the finest in construction and are backed by an old, firmly-established organization. Write **TRUCK HEADQUARTERS** for information.

GENERAL MOTORS TRUCK COMPANY
One of the Units of General Motors Corporation
Pontiac, Michigan
Branches and Distributors in principal cities. (280)

A·B·C
STARTING & LIGHTING SYSTEM FOR FORD CARS
TWO VOLT SIX VOLT

Conforms more closely to Ford engineering and construction than any other electric starting system ever sold

A. B. C. STARTER CO. - Detroit, Mich.

FORD CAR OWNERS USE KEROSENE
(Coal Oil)

One Mile on Kerosene Costs Less than ½ cent
One Mile on Gasoline Costs From 1¼ to 1½ cents

BUY A DETROIT KEROSENE EQUIPMENT

Save 60% Price of Equipment \$25 f. o. b. Detroit
30 days Trial or MONEY BACK — ACT PROMPTLY!
These are days of strict economy

DETROIT KEROSENE CARBURETOR CO.
KRESGE BLDG. DETROIT
Department 16

"Brains In the Rear Axle"

BAILEY
Non-Stall
DIFFERENTIAL

Bailey Non-Stall Differential Corp.
1124 Michigan Avenue Chicago, Ill.

ARISTO
BEST ALL WAYS
MOTOR OIL



UNION OIL CO. OF CALIFORNIA



PERFORMANCE

That's what the truck prospect is interested in most of all. If he knows your truck is powered with a Wisconsin Consistent Motor, a big step has been made in its sale. Wisconsin Motors are champions of the world on road and speedway—why not link their reputation to your product? Write for specifications of different types and sizes.

WISCONSIN MOTOR MFG. CO., MILWAUKEE, WIS.
Sta. A, Dept. 314.
Pacific Coast Distributors: Earl P. Cooper Co., 1428 Bush St., S. F., Cal., and 1310 S. Los Angeles St., L. A., Cal. W. P. Kenney, 68 First St., Portland, Ore. Chandler-Dunlop Co., Seattle, Wash.



Give 'em air

Tire insurance for one dollar

The first question the tire adjuster will ask is: "Have you kept your tires inflated to the pressure we prescribe?" If you haven't—and the condition of the tire will show whether you have or not—he will allow nothing for their premature destruction or blow-out. Your tires will not stand up under the weight of your car unless you fill them to the requisite air pressure. They will not last if you run them underinflated. Test your air pressure daily with a

Twitchell Air Gauge
AND SAVE YOUR TIRES

Price \$1.25 THE TWITCHELL GAUGE CO., 1214 Michigan Avenue, Chicago

Portland, Ore.—G. G. Gerber has opened a radiator repair shop at 53-55 N. Ninth St.—J. H. Ainscough has opened new quarters at Broadway and Ankeny St., to distribute Amazon tires.—R. W. Lee and F. C. Laster have opened an electrical and service shop at Sixth and Burnside Sts.—James Dougherty has taken an active financial interest in the Western Motor Sales Co., Chalmers and Hal Twelve distributor, and will act as secretary and treasurer.—Perfection tires will be sold throughout Oregon and Washington in a wholesale and retail way by the Tri-State Tire Co., which has located at 72 Sixth St.—The Keaton Tire & Rubber Co. has opened a factory branch in the Congress Hotel Bldg., with James S. Tormey as manager.—The Lancaster Tire & Supply Co., Inc., has opened quarters at Broadway and Ankeny St., to sell tires, oils and greases.

* * *

Seattle, Wash.—S. C. Renner is having a two-story building erected for him at Broadway near Pike St., which when occupied will be one of the largest automobile sheet metal factories in the Northwest.—Wire Wheel Service Co. has occupied quarters at 309-311 E. Pine St. and will sell and repair Houk wire wheels.—The Barshar Motor Car Co. has located in its new two-story building at 1621 Twelfth Ave. and will continue selling Liberty cars and Stegeman trucks.—Portage tires for the Washington and Idaho market will be handled by the Eldridge-Buick Co. here.

* * *

Safford, Ariz.—Kirtland's Garage has taken the Goodrich tire line and has purchased a stock worth \$2,500.

* * *

East Las Vegas, N. M.—The Las Vegas Studebaker Garage has been bought by F. G. Mantoya and B. C. Hernandez.

* * *

Las Vegas, N. M.—William H. Springer has taken the Kissel-Kar agency.

* * *

Oxnard, Cal.—C. R. Arnold has been appointed Kissel-Kar dealer.

* * *

Brawley, Cal.—The Akin Auto Electric Service will act as Willard storage battery service station.

* * *

Nez Perce, Ida.—Benjamin Kienholtz & Son have purchased the garage and machine shop of Heston & Son for \$15,000.

* * *

Pullman, Wash.—Charles Winterer, Maxwell dealer, will build a new garage and salesroom and will add the Mitchell agency.

* * *

Phoenix, Ariz.—The Savage Tire Corp. of San Diego, Cal., has opened a sales branch here, under the management of M. P. Redondo, to distribute Savage tires throughout Arizona and eastern New Mexico.

* * *

Ontario, Cal.—George S. Cummings has purchased the Buick agency here.

HAVE YOU A MOTOR CAR?

LISTEN! See that groove controlling the oil. The groove full of oil forms a dam. Gas cannot get down, surplus oil cannot get up. That's why motor has more power, no carbon.

ISN'T THAT A REASON?

"NO-LEAK-O"

Representatives Write for booklet B.
H. G. Paro, 1414 S. Michigan Ave., Chicago; J. W. Van De Grift, 627 Charles Bldg., Denver; The Gavin-Williams Co., 1300 5th St., San Diego, Cal.; Chamberley & Sons, Nashville.

AUTOMOBILE ACCESSORIES CO., Baltimore, Md.



INTER-STATE

The best light car on the market today.
Economical in every way, and tremendous Power. Once an Inter-State owner always an Inter-State owner.

WRIGHT MOTOR CAR CO.

1001 SOUTH HOPE ST.

AS772 Distributors California and Arizona Main 627



Elgin Six

"The Car of the Hour"

Big, Beautiful, Impressive, Powerful, Dependable,
Economical

"Built Like a Watch"

4-Passenger Roadster **\$1095**
5-Passenger Touring Car.....

Subject to Change Without Notice
Write for descriptive catalogues

Elgin Motor Car Corporation CHICAGO
U. S. A.

Main 1076 **CAMBRIA SPRING CO.** F 5233

Incorporated
"WE SAVE YOU MONEY"



Wheels and Rims
Tire Racks and Platforms

All Makes in Stock
Wholesale and Retail

AUTO AND TRUCK SPRINGS

Demountable Rims Sold and Applied
Spring Steel Bumpers

SPRINGS REPAIRED, FORGINGS AND FRAMES STRAIGHTENED

Factory: 913-921 So. Santee St., Los Angeles, Cal.

Office: 916-918 So. Los Angeles Street

Special Issue
of

MOTOR WEST

February 15th

San Francisco Show Number

LAST ADVERTISING FORMS GO TO PRESS
FEBRUARY 14th

MOTOR WEST PUBLISHING CO.

911 MARSH-STRONG BUILDING
LOS ANGELES, CAL.

Save the Nation's Gasoline with the

SUNDERMAN \$6 Vacuum Carburetor

This price maintains on Ford and Metz models

Other cars \$8 and \$10, depending on fittings necessary

This perfect carburetor will save you, no matter what your car, from 30 to 50% in your gasoline consumption. At the same time it will give your motor power, speed and flexibility beyond your fondest hopes.

It's your duty to your country to save gasoline when you can. It's a dealer's duty to promote the sale of an instrument that will cheapen the cost of running a car.

Send in your orders now—Fall is a big carburetor season

SUNDERMAN CORPORATION

17 Chambers Street (Dept. C) NEWBURGH, N. Y.
Western Office: 408 Kresge Bldg., Detroit.

RIVES AUTO PEDAL

Never Slip Pads \$1 per Set

INCLUSIVE

Cover the entire Field—Rubber Vulcanized through and locked securely to the metal.
Geo. H. Rives Mfg. Co., Inc. 2107 Woolworth Bldg., New York



PRESSED STEEL PARTS FOR AUTOMOBILES AND TRUCKS

ESTIMATES CHEERFULLY FURNISHED

The Bossert Corporation UTICA
NEW YORK

MOTOR WEST

Reaches a larger percentage of dealers than
any automobile publication circulated on the
PACIFIC COAST.



WHY NOT

'phone for HUGHES when you
need first-class publicity or commercial
PHOTOGRAPHS in a hurry?

938 Hinton Avenue
Los Angeles, Cal.

Phones: Main 4268
F-5969

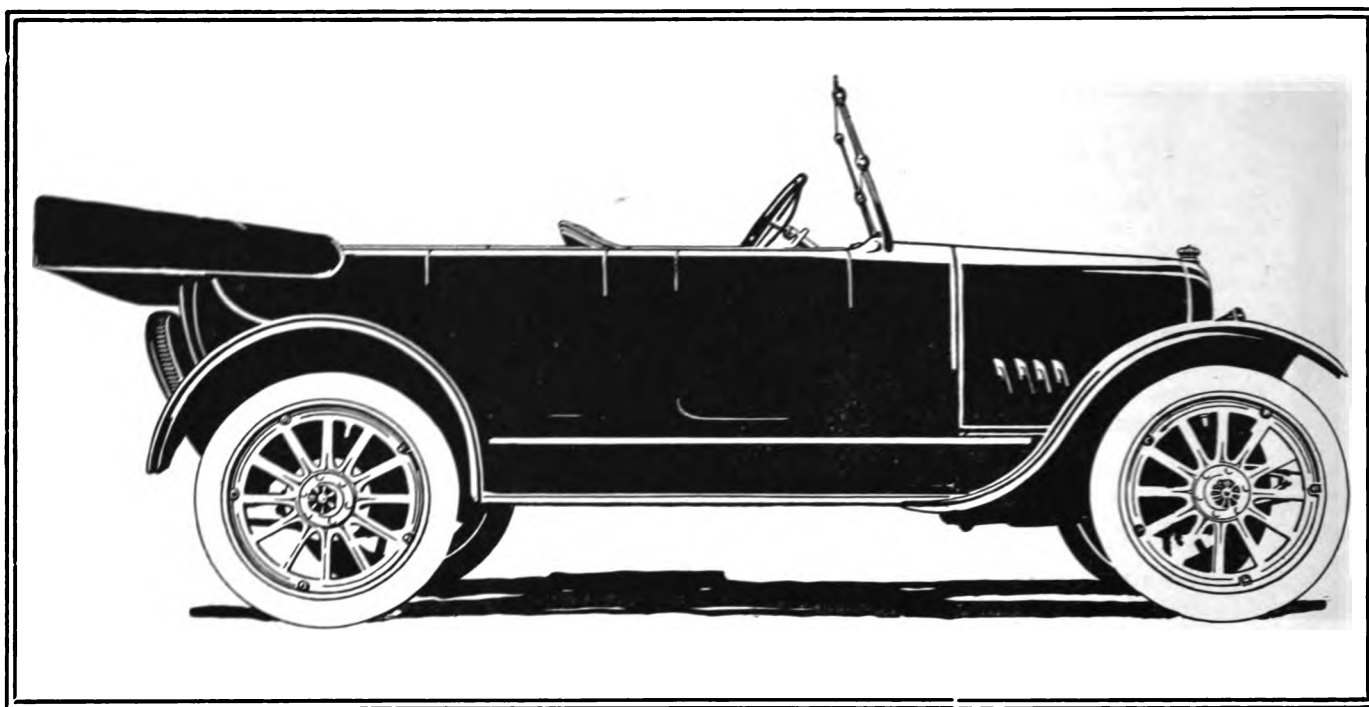
LOS ANGELES WAREHOUSE COMPANY

MAKES A
SPECIALTY OF

AUTOMOBILE STORAGE

CARS UNLOADED
DIRECTLY INTO WAREHOUSE

316 COMMERCIAL STREET
A 4727, Main 4787



WHY I PICKED THE WONDERFUL BRISCOE

by *J. J. Frey* —Dallas, Texas

"One word—CLASS—nutshells my reasons for choosing the wonderful Briscoe. I'm what you might call an old-timer in the automobile game. I know the field, and the more you know the light car field, the better you like the Briscoe.

"So, when I wanted the best value to offer light car buyers—I chose the Briscoe, and believe me, my increased profits during the past year show my good judgment.

"The Briscoe stands up. The famous half-million dollar motor gives wonderful satisfaction, and the wide choice of beautiful Briscoe body designs makes the Briscoe practically sell itself."

TENISON, HARDY & FREY CO., Dallas, Texas.

Now, Mr. Wide Awake Dealer—

Frey chose the Briscoe—the *class* of the field. And Frey is making more sales and more money than ever before.

Perhaps *you* can get the Briscoe for your locality. It's worth thousands of dollars a year to the dealer who gets it. Let us tell you the new Briscoe plan. Address

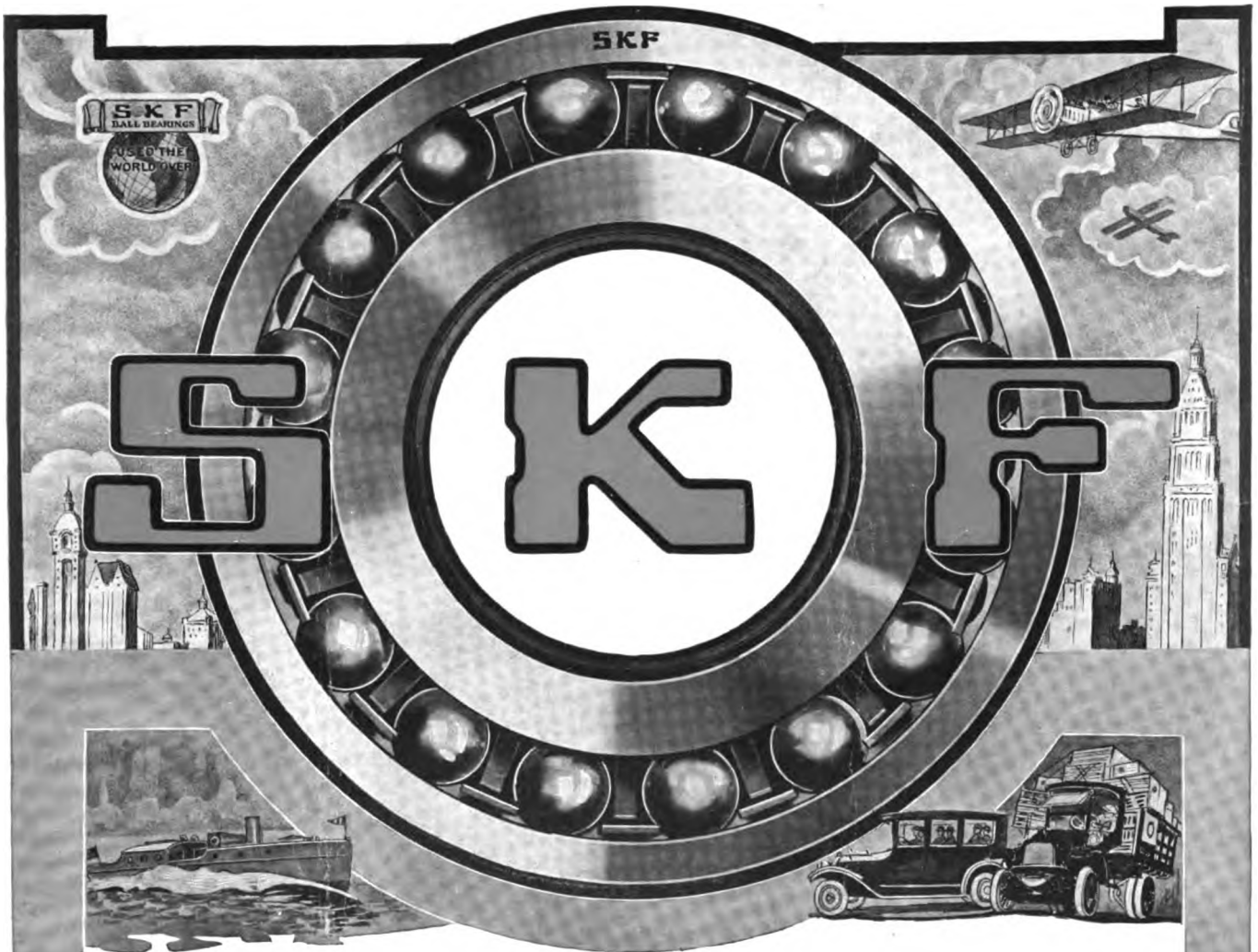

Briscoe Motor Corporation, Dept. 155, Jackson, Mich.

BRISCOE \$725
THE CAR WITH THE
HALF-MILLION DOLLAR MOTOR

NEW YORK
PUBLIC LIBRARY
ASTOR LENOX TILDEN FOUNDATION

Motor West

THE MOTORING AUTHORITY OF THE PACIFIC COAST



NO other bearing is so universally used as SKF. On the fastest airplanes - the sturdiest trucks - the swiftest motor boats and a host of other applications, the self-aligning feature and the double row of balls give SKF exclusive characteristics of efficiency and quality.

HARTFORD **SKF BALL BEARING CO.** CONNECTICUT



Lithe, Sinewy, Enduring United States 'Royal Cord' Tires

To know the construction of '*Royal Cord*' Tires is to know why they have held their supremacy.

The many layers of many powerful little cords in these tires,

—like the lithe, sinewy, enduring muscles of a physically perfect man,

—give them the elasticity, the resiliency, the endurance which is so exclusively theirs.

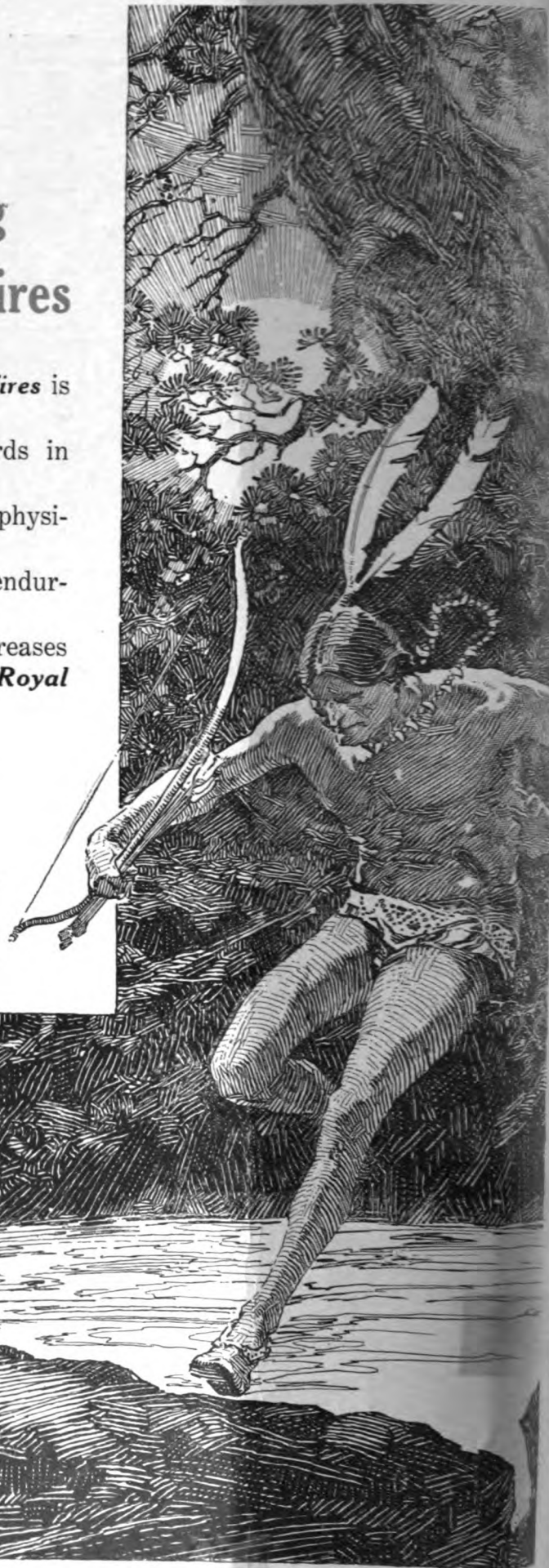
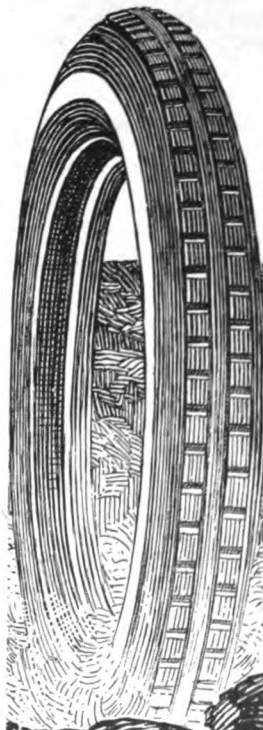
Their vast, and still growing vaster, sales increases are the proof of what wise motorists think of '*Royal Cord*' Tires.

United States Tires Are Good Tires

'Royal Cord' 'Nobby' 'Chain' 'Usco' 'Plain'

Also Tires for Motor Trucks, Motorcycles, Bicycles and Aeroplanes

United States Tires and Tire Accessories
have all the Sterling Worth and Wear that make
United States Tires Supreme.



Mention "Motor West," Please, When Writing to the Advertiser

Tire Values. -and how to judge them-

THESE are days of conservation, a time to make every dollar do its utmost. Some basic information about tire values is opportunity. Many different makes of tires are advertised, but in a way rather confusing to car owners. Claims conflict, glittering generalities are the rule. That is why Firestone advertising presents to the public the fundamental

principles of good tires, Most Miles per Dollar tires. Below is shown a cross section of a Firestone Cord Tire. This is the tire that is giving car owners the greatest possible efficiency in wear and fuel economy. Each part is briefly described. Inspect the vital units of this construction. You will soon be buying more intelligently, making every dollar do its utmost.

FIRESTONE TIRE AND RUBBER COMPANY
Akron, Ohio Branches and Dealers Everywhere

Tread A touch of your finger tips proves the resilience of a Firestone Cord Tire. And the remarkable mileage of this enduring tread are matters of record in every section of the country.

Cord and Rubber Body Each wall of stout cord in the Firestone Cord Tire acts independently of adjoining cord walls. Firestone construction forms one flexible unit, strong and enduring.

Reinforcement for Sidewall and Bead A special reinforcement that carries the hinge to the widest portion of the tire where the bending action has least effect.



Cushion Stock This section of fine rubber is a shield to the body or "carcass" of the tire. It absorbs road blows. The Firestone method of making it from the purest rubber and of unusual thickness has added materially to its effective performance.

Most Miles per Dollar

Breaker Strip A special open fabric of great strength, filled and coated with pure rubber. Breaker strips spread road shocks over large area of the cushion and body of tire, preventing stone bruise.

Side Wall Here is the protecting element for the body on each side between tread and bead, a combination of great resilience and resisting power.

Piano Wire Bead In every Firestone Cord Tire there is enough piano wire to equip four pianos. This wire is braided into a cable of astonishing strength to form the bead. The bead is the anchorage for the entire structure and must cling firmly to the rim.

Firestone

CORD TIRES

THE SATURDAY EVENING POST February 3, 1918

Pierces snow and fog without back-glare
Why Noviol Conaphore is the only headlight glass that does

THE CONAPHORE shows the light from the headlight with almost perfect clarity and the driver's vision. "Noviol" has been used in the light of the headlight for years. This glass is made of a special material and is not affected by the heat of the engine or the cold of the winter. It is the only headlight glass that does not back-glare. The Conaphore is made of Noviol Glass (a special material) and is not affected by the heat of the engine or the cold of the winter. It is the only headlight glass that does not back-glare. The Conaphore is made of Noviol Glass (a special material) and is not affected by the heat of the engine or the cold of the winter. It is the only headlight glass that does not back-glare.

CONAPHORE
SALES DIVISION
CORNING GLASS WORKS

Tie up your business to this nation-wide advertising

How you can make extra good profits on Conaphores in 1918

The 1918 Conaphore campaign in the leading magazines and farm papers is the strongest ever put behind an automobile headlight glass. The publications used by Conaphore have a total circulation of more than 7,000,000. A strong, educational message on the efficiency of Conaphores will reach more than 28,000,000 readers regularly.

Tie up to it!

Focus this nation-wide campaign on your own business. Direct the demand straight to your counters. Get your full share of Conaphore profits!

Trade aid

Put the Conaphore sales-helps behind your own sales efforts, and you will get the major portion of the headlight business in your territory. We supply the following items without charge:

Order getting consumers' booklet—Two color, envelope-size folder telling the complete Conaphore story. A great business getter when sent out with your mail or passed out over your counters. Ample space for your own signature.

Attractive window transparency—Two color poster, 14 inches wide. Marks your store as a Conaphore sales-depot. This design also available as a store or counter card—even a billboard poster.



The Conaphore

Smooth front surface. Easily cleaned.
Does not clog with dust, mud or snow

Manufactured by the World's Largest Makers
of Technical Glass

CONAPHORE

No-Glare—Range 500 ft.—Pierces
Fog and Dust

1918 wall chart—Combination sales-poster and chart of headlight sizes for different makes of cars. Has strong attention-getting value, and delivers a real sales-punch. Should be on every dealer's wall.

Set of newspaper electros—A series of six newspaper ads, suitable to run in your regular space. Furnished complete, with plenty of room for your own signature.

Consistent use of these trade helps will keep the fact that you sell Conaphores constantly before the motorists of your territory. It will help you cash-in on our national advertising.

Jobbers—Write us for the Conaphore proposition—it is sure to interest you.

Dealers—Write your jobber, or direct to us, for full particulars on the Conaphore.

Retail Price List (Per Pair)	Noviol Glass	Clear Glass
5 to 6 1/4 inches incl.	\$2.40	\$1.60
7 to 8 1/4 inches incl.	3.50	2.50
8 1/4 to 10 inches incl.	4.50	3.00
10 1/4 to 11 1/4 inches incl.	6.00	4.00

Prices 25 cents more per pair west of Rocky Mountains.

Sizes vary by steps of 1/4-inch above 6 1/4 inch size.

CORNING GLASS WORKS
Edward A. Cassidy Co., Inc., Managers
Madison Ave. and 40th St., N. Y. C.

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Radius Rods that NEVER break

These features not found in ANY other Motor Truck.
WHEELS that are too strong to break down.
RADIATOR that never leaks or wears out.
SPRINGS, Armleder Patented. Guaranteed not to break or creep.
FRAME that will not break or sheer out of square.

ARMLEDER

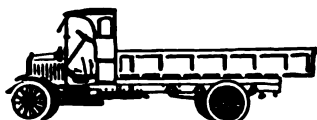
Motor Truck 2 Ton—WORM DRIVE—3½ Ton

An Armleder is the CLEANEST motor truck to demonstrate. Every feature can be quickly seen and understood. Our financial strength guarantees business continuation and perpetual parts replacement. Armleder dealers are carefully selected for stability. We offer a rare chance to a few more who can measure up to the Armleder standard.

ARTHUR H. HERTZ

112 MARKET ST., DEPT C, SAN FRANCISCO,
 In Charge of Western Sales
 ARMLEDER MOTOR TRUCKS.

Manufactured by
 THE O. ARMLEDER CO.
 Cincinnati, O.



"QUALITY FIRST" is ever the uppermost thought in the production of

CENTURY-PLAINFIELD TIRES

and governs every step of procedure from the purchase of the raw materials to the final inspection.

OVER SIZE HAND MADE

The result is tires of such super-excellence that they last longer and give much greater satisfaction than those made to sell on price.

EXCLUSIVE TERRITORIAL ARRANGEMENTS, for high-class dealers, permit them to build successful and permanent business.

TERRITORIAL DISTRIBUTORS:

Baker, Hamilton & Pacific Co., J. B. Wood Tire Co.,
 San Francisco 927 S. Hill St., Los Angeles
 E. M. Wade & Co., Portland and Spokane.

San Francisco Service Store: Hoelle-Rubber Sales Co.
 Branch and Warehouse: 430 Golden Gate Avenue, San Francisco.

Century -PLAINFIELD Tire Co.

PLAINFIELD, N. J.

"A subsidiary of the Rubber Insulated Metals Corporation, exclusive manufacturers of the RIMCO Rubber Products by the ELCHEMO process."



Kissel Exclusiveness and Originality

In a new Kissel model, to be first shown on the Pacific Coast, at the San Francisco Show, we promise you something so unusual in originality and value that it will set an absolutely new standard in the motor car industry. In points of improvements, refinements and features—the KisselKars will prove decidedly unique.

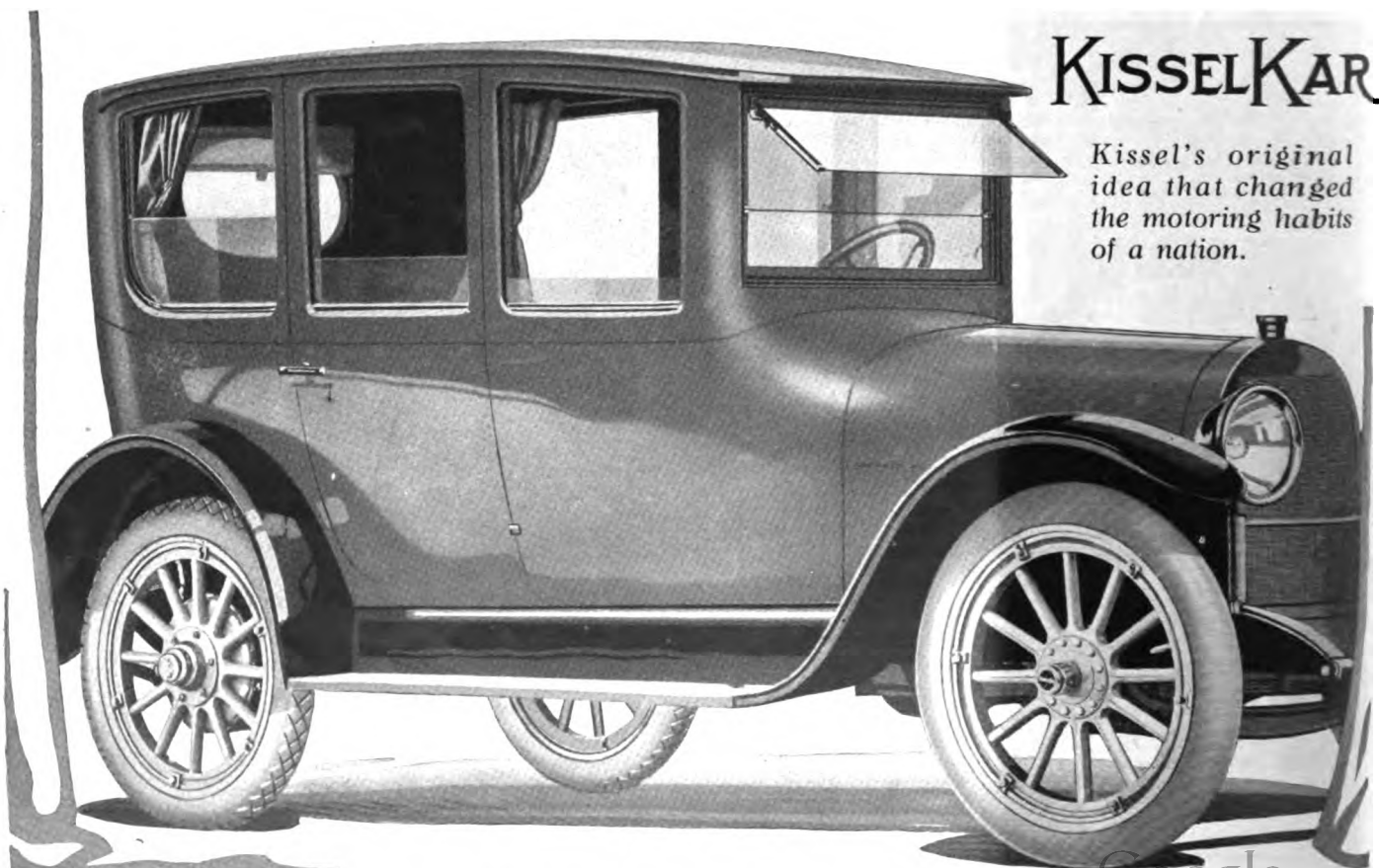
The Hundred Point Six

5-Passenger

Staggered-Door Sedan

Characterized by unusually graceful lines, replete with custom-built appointments. Note the new ALL-YEAR Top that is entirely removable or in which all side windows may be lowered or raised—an exclusive Kissel feature. Compare the Hundred Quality Features of the Hundred Point Six. Its efficiency, reliability, quietness and economical maintenance are among those superiorities car purchasers are looking for today. **DON'T MISS THE KISSEL EXHIBIT AT THE SAN FRANCISCO AUTOMOBILE SHOW, FEBRUARY 16th TO 24th.**

PACIFIC KISSELKAR BRANCH, San Francisco, Cal.



KISSELKAR

Kissel's original idea that changed the motoring habits of a nation.

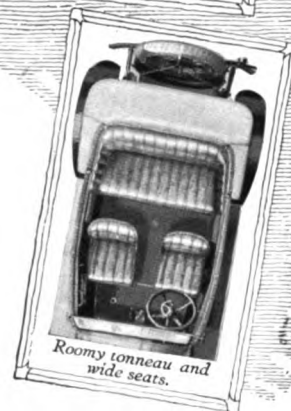


at San Francisco's Automobile Show—

By virtue of utility, economy, supreme quality and originality, the ALL-YEAR Top, in the 1918 models, continue to maintain its leadership. Note how it is built **in**, not **on**, and is entirely removable—no visible fastenings or attachments—no rattles, draughts or leaks.

The Hundred Point Six

4-Passenger Sedané



Inspect its unusually roomy tonneau. Note the unusually wide seats and aisle, the cushions of unusual depth, doors of unusual width. Examine the ALL-YEAR Top, that is entirely removable, or in which all windows may be lowered or raised.

DEALERS: Don't miss the new KisselKar to be introduced at the San Francisco Show. With the public demanding the unusual in automobile features, the KisselKars will prove the sales leaders in 1918. Write us or see at the Show or at any of our branches.

Branches at: Los Angeles, San Diego, Fresno, Oakland, Seattle and Portland.

The ALL-YEAR Car



ANNOUNCEMENT

Announcement is made of the opening of our factory branch at 1436 Van Ness Avenue, San Francisco. A large and complete line of Mohawk "Quality" casings, plain, ribbed and non-skid treads, also Mohawk "Quality" Tubes, gray and Indian red, is already in stock. George R. Cowden is manager. He will be pleased to see all Mohawk dealers and to meet others in the trade.

"Quality," as ever, is the great predominant feature of Mohawk Tires. In the materials used, in the workmanship, in the whole careful process of manufacture, we have held unalterably to the highest possible standards.

With war conditions to contend with, and greatly increased costs of manufacturing, real quality is more important and harder to get than ever.

Mohawk "Quality" Tires are distinctive in appearance and unparalleled in service and dependability.

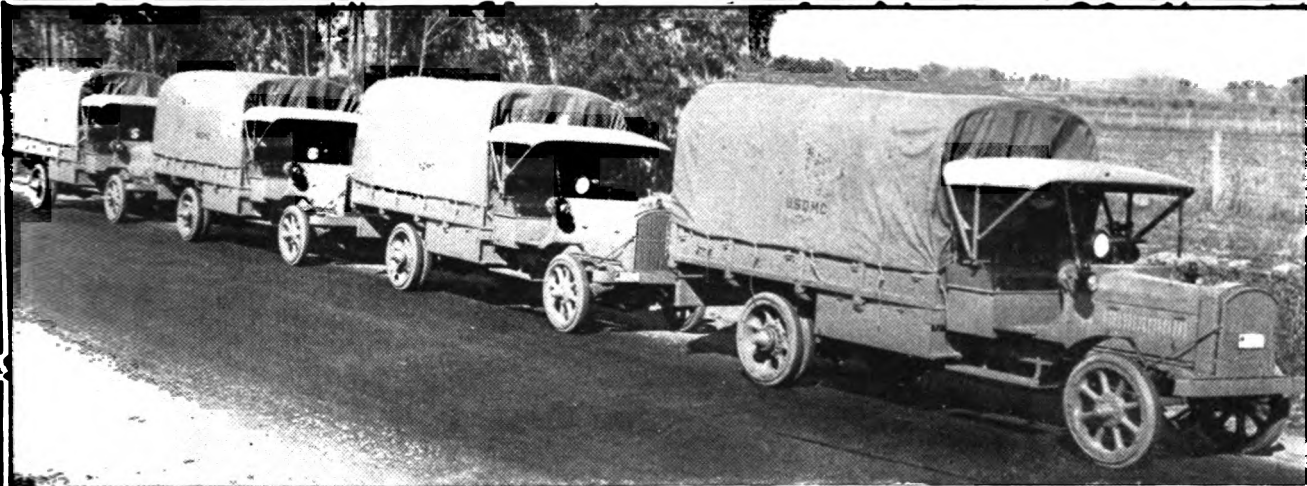


The Mohawk
Rubber Co.

AKRON, OHIO

1436 Van Ness Avenue
San Francisco





MORELAND TRUCKS
for U.S. ARMY
Equipped with
Smith Wheels
"EVERLASTING"

YOUR TRUCK or Uncle Sam's—any capacity from One Ton to The Limit—will Run Easier, Last Longer and **DELIVER FAR GREATER MILEAGE** from **TIRES** and **GASOLINE** when equipped with **SMITH WHEELS**.

Moreland have made Smith Wheels standard equipment for their 1½, 2½, 4 and 5-ton models.

Smith Wheels Guaranteed **FOR LIFE OF TRUCK** on which originally placed.

Insist on Smith Wheels every truck you buy!



DU PONT AMERICAN INDUSTRIES



The Auto Specialty That Sells Itself

100% efficiency is solving one of the most vexing problems of motoring

Pontoklene removes tar like magic! Makes tar melt and run like the proverbial snowball in a real hot place. Is also a perfect grease and oil remover—restoring the original polish of a car without rubbing. Much better than gasoline for cleaning engines.

Successfully established wherever introduced by distribution of samples. Every sample makes a buyer.

Garages supply it to their car washers because it saves hours of time and insures clean work.

The empty can makes a fine reserve oil carrier.

PRICES:— $\frac{1}{4}$ GALLON \$1.00,
 $\frac{1}{2}$ GALLON \$1.50.

Quantity Discounts to the Trade.

Delivered free upon receipt of price if no dealer in your city can supply you.

SPECIAL PROPOSITION TO DEALERS AND DISTRIBUTORS.

Get Pontoklene in stock quick—before the road tar season starts. We will help you introduce it. After that it sells itself. Write us today.

DU PONT CHEMICAL WORKS

Owned and Operated by
E. I. du Pont de Nemours & Company,
Equitable Bldg., New York.

Mark X before subject that interests you and MAIL THIS COUPON to
E. I. DU PONT DE NEMOURS & CO.
Advertising Division
WILMINGTON, M.W. DELAWARE

Pontoklene	Motor Fabrikoid
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Blasting Powder	Tr. Sp. Fabrikoid
Farm Explosives	Mar. Sp. (U.S. Std)
Hunting	Fabrikoid Sheet'g
Trapshooting	Fairfield Rub. Cl'th
Py-ra-lin Tol. Gds.	Anesthesia Ether
Challenge Collars	Leather Solutions
Novelty Sheeting	Soluble Cotton
Transpar't Sh't'g	Metal Lacquers
Py-ra-lin Rds, Tbs	Wood Lacquers
Py-ra-lin Pipe Bits	Mantel Dips
Py-ra-lin Spec'ties	Bronzing Liquids
Sanitary Wall Fin.	Pyroxylin Solvents
Town&C'try Paint	Refined Fusel Oil
Vitrolac Varnish	Com'l. Acids
Vitrolac Stain Fin.	Alums
Flowkote Enamel	Saltpetre
Liq. L't. for Mills	Wood Pulp
Antcx. Iron Paint	Pigment Bases
Shingle Stain	Tar Distillates
Auto Enamel	Dyes and Bases

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Visit the Du Pont Products Store
1105 Boardwalk,
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THE DU PONT AMERICAN INDUSTRIES ARE:

E. I. Du Pont de Nemours & Company, Wilmington, Delaware	Explosives
Du Pont Chemical Works, Equitable Bldg., New York	Pyroxylin and Coal Tar Chemicals
Du Pont Fabrikoid Company, Wilmington, Delaware	Leather Substitutes
The Arlington Works, 725 Broadway, New York	Ivory Pyralin and Cleanable Collars
Harrison Works, Philadelphia, Pa.	Paints, Pigments, Acids and Chemicals
Du Pont Dye Works, Wilmington, Delaware	Dyes and Dye Bases

DU PONT

MOTOR WEST

THE MOTORING AUTHORITY OF THE PACIFIC COAST

VOL. XXVIII., No. 9

FEBRUARY 15, 1918

\$2.00 PER YEAR

N. W. TOURIST ASSN. TO CONTINUE WORK

Will Continue Its Propaganda of Attracting Travelers to Oregon, Washington and British Columbia.

Reorganization on the basis of apportioning funds for operation for one year only, and the expression of opinion that all activities should immediately cease, if the government takes any measures to curtail tourist traffic or transportation facilities were the features of the Pacific Northwest Tourist Association, at a meeting at the headquarters of the executive secretary. The action was taken in recognition of the fact that no other tourist promotion agencies have wholly discontinued, and that if the Northwest were to do so it might leave the district at a distinct disadvantage. The organization has funds to the extent of \$112,000 which have been appropriated by the legislatures of Oregon, Washington and the parliament of British Columbia for the promotion of tourist interest in this district and the apportionment for the coming operations of the organization will be limited to one-half this amount to cover a period of one year. Directors and officers present were A. E. Todd, Victoria, B. C., president; Emery Olmstead, Portland, vice-president; R. L. Sparger, vice-president, and a full representation of directors including Herbert Cuthbert, executive secretary, Seattle.

Minto Heads Carlisle Tires on Coast.

Charles H. Minto, who has long been connected with tire sales in the Pacific Coast territory, has been appointed Western district manager for the Carlisle Cord Tire Co. of New York City. Minto formerly acted as assistant for C. A. Gilbert, now sales manager for the Carlisle company, when the latter was Pacific Coast manager for the United States Tire Co.

37 Carloads of Grants for Coast.

Thirty-seven car loads of Grant Six cars to satisfy the demands of the Pacific Coast represent the successful result of a recent visit of Frank O. Renstrom, Grant dealer in San Francisco, to the Grant factory. Recognizing how shy, wild and far between freight shipments of motor cars have become, Renstrom put into practice the ancient moral about Mohammed journeying to the mountain when he discovered the mountain would not come to him. In addition to the thirty-seven car loads of Grants now arriving on the Coast, about thirty more are already billed for shipment as soon as the first consignment reaches the Coast dealers.

Heads Ajax Tire Sales on Coast.

Sales of Ajax tires on the Pacific Coast are now under the management of Ernest E. Pickering, recently appointed to his new position by the Ajax Rubber Co., Inc. San Francisco will be his headquarters. In length of service Pickering is one of the oldest members of the Ajax organization and formerly acted as supervisor of sales in the Ajax territory embracing Nebraska and North and South Dakota.

Kleiber Plant Attaining Large Size.

Kleiber trucks are now manufactured in San Francisco in a factory which takes in three large buildings, which cover almost an entire city block. The total floor space of the plant of Kleiber & Co. is approximately 75,000 square feet. In addition to its Pacific Coast field the company is steadily building up an active market for Kleiber trucks in the Far East and along the western coast of South America.

To Head Dreadnaught Sales on Coast.

The distribution and sales of Dreadnaught tires will be handled by L. L. Lehoussé, of San Francisco, who has been appointed Pacific Coast resident manager by Charles F. U. Kelley, Inc., sales agent for Dreadnaught tires.

CAL. 103,954 AHEAD OF 1916 LICENSES

Despite War Conditions, Registrations Increased Over 60 Per Cent During Year—Los Angeles Leads.

During the past year 1917, a year whose opening prosperity was early overshadowed by the final and inevitable entry of the United States into the world war, the state of California issued a total of 103,954 more motor vehicle licenses than during the previous year of 1916. The total 1917 registration for the state was 266,750, as compared with 162,796 for the previous year. Los Angeles county easily maintained its long lead as first in the number of automobiles contained in its borders, with 83,720 registrations. Next in order came San Francisco county with 30,917, Alameda, 18,270 and Fresno, 12,264. Los Angeles city, as is consistent with the figures for the county of the same name, led all other municipalities in the state in number of cars owned. In the Southern California metropolis a total of 53,741 registrations were made compared with 44,585 during 1916. Next comes San Francisco city, whose boundaries are co-terminous with San Francisco county, with 30,917. Other cities in which 1917 registrations were above the 2,000 mark follow: Oakland, 11,467; Fresno, 6,645; Pasadena, 6,424; San Diego, 6,191; Sacramento, 5,419; Long Beach, 4,504; San Jose, 4,004; Stockton, 3,710; Berkeley, 3,094; Bakersfield, 3,059; Santa Ana, 2,330; Riverside, 2,237; and Santa Barbara, 2,230.

Oakland Shipments Reach Seattle.

A whole trainload of Oakland Sensible Sixes, 50 freight cars bringing 250 Oaklands, arrived in Seattle recently for the North Pacific Oakland Company.

PORTLAND SHOW IS MARKED SUCCESS

Many Sales Recorded and New Connections Announced.—Much Interest Shown in Tractors and Trucks.

"The most successful automobile show ever held in the Pacific Northwest," is the unanimous verdict of dealers and public of the ninth annual Portland motor car exhibition, which closed February 13 after a lively week.

To begin with, more cars than ever before were shown, and the same applies to trucks and tractors. Then the attendance far surpassed that of any previous show. The management had made a particular effort to interest dealers and prospective buyers, including farmers, in the various displays. The success of their efforts was proved by the fact that nearly 1,000 railroad tickets from outside points were validated by the management.

Last, but by no means least in importance, sales were remarkably good. Folks in Oregon and Washington have much more money than they had a year ago, and they are buying cars. High prices for wheat, wool, spruce, the big payrolls from the ship-building industry, and good circulation of money in general, are no doubt primary causes. Then, too, the public has come to realize that the passenger automobile, as well as the truck and tractor, are essential utilities and in no sense luxuries.

Thirty-eight different makes of passenger cars, 23 different makes of trucks, and 16 makes of tractors were shown. The number of passenger car models exhibited was 112, and of trucks more than 30.

Portland has developed surprisingly as a tractor center. Few of the dealers, even, realized that 16 different makes of tractors are represented in the city. The public interest in the truck and tractor, particularly that manifested by farmers, was very marked.

One of the interesting features of the show was the number of new cars in this territory that were announced coincidentally with it. The Olympian was shown for the first time. So was the Harroun. The California Motor Sales Co., of San Francisco, is to establish a Northwest branch in Portland, with W. D. Doane as manager, to handle the former. Lee L. Gilbert, new Elgin distributor for Multnomah County, has the Harroun.

Then the entry of the Columbia Six into the Oregon territory was announced. It will be handled by the Auto Rest Garage, of which C. D. Mc-

Phail, who recently took the Stutz agency, is manager. This car did not arrive in time for the show.

Another car entirely new in the territory that was a center of interest was the Daniels Eight, shown for the first time in the Pacific Northwest. A. C. Henderson, of Walla Walla, is the Northwest distributor. Isaac Brunn, of the Brunn Motor Car Co., has taken the agency.

The Daniels is a big and luxuriously appointed car, selling in a high price class. The model at the show was a special job in dark green, with Victoria top and without side boards.

The new Studebaker, all three models of which were shown by the Oregon Motor Co. for the first time west of Chicago, attracted great attention. This car comes in a Big Six, Light Six and Light Four. All the models are entirely different from any previous Studebaker. They really created a sensation at the Portland show.

These three models were rushed by express from Montreal to Portland by the Studebaker Corporation of America, and right after the show ended were expressed to San Francisco for the show there.

While a number of attractive special jobs were features of the Portland show, most of the entries were stock models. The practical utility feature of the passenger automobile had been strongly emphasized before the show, and for that reason special jobs were fewer than would otherwise have been the case.

Cooper and Firestones in Sacramento.

While not committing himself about giving up racing, Earl P. Cooper has taken the Firestone tire agency in Sacramento, Cal. He has established a margin of safety by declaring that nine-tenths of his time will be spent in the capital city.

Eagal Heads Pacific Kissel Sales.

The appointment of John N. Eagal as sales director of the seven large branch houses of the Pacific KisselKar Co. along the Pacific Coast is the present outcome of an active career with the motor car industry dating from almost the first days of its uncertain infancy. In his new capacity Eagal will have supervision of the sales of KisselKars and Kissel trucks. Double steam cars and Federal trucks throughout the state of California, Oregon, Washington, Arizona, Nevada, Utah, Idaho, British Columbia and the Hawaiian Islands. Most of the new sales director's activities have centered in San Francisco, where he was prominent in the organization of the motor car dealers' association in that city and also in the management of the annual automobile shows.

Century-Plainfield Service in So. Cal.

The J. B. Wood Tire Co., which was recently awarded the factory distribution of the Century-Plainfield tire for Southern California, Arizona and New Mexico, has just opened commodious quarters at 927 South Hill street, Los Angeles, just outside the restricted traffic district, and yet within a stone's throw of the automobile section of the city. The building is 21x150 feet in dimensions, and is stocked with \$75,000 worth of Century-Plainfield tires, tubes and accessories. Owners whose cars are equipped with these tires are thus assured of first-class service at all times.

J. B. Wood, head of the company has been connected with the Pacific Hardware & Steel Co. since 1903, been sales manager of the Los Angeles branch of that company for six years, and manager one year. For 15 years he has traveled through every nook and corner of Southern California, and knows his territory like a book. Mr. Wood has just secured the services of E. G. Vestal, formerly connected with the Knight Tire & Rubber Co., as a member of his sales force.

Lomax & Chapman to Exhibit Line.

Lomax & Chapman, of San Francisco, have arranged with the Geo. H. Rives Mfg. Co., New York City, to act as Pacific Coast representatives for the Rives Safety Auto Pedal Pads. The line of products handled by Lomax & Chapman has long been known on the Pacific Coast as a standard line throughout the jobbing trade. The company will be well represented at the large Pacific Automobile show held annually in San Francisco. Four of its line of products will be on exhibit—the well-known Leath-R-Nu Top Dressing, manufactured by the Nu-Back Mfg. Co.; Five Star Lubricant, manufactured by the Pacific Coast Lubricating Co.; the Rives Safety Auto Pedal Pads, manufactured by the Geo. H. Rives Mfg. Co.; and the Greb Extension for Ford chassis and other Greb accessories, manufactured by the Greb Co., Boston, Mass.

Costello Heads Own Tire Co.

John P. Costello, formerly president of the Costello-Lang Co., San Francisco, has opened his own tire store in that city on Van Ness Ave. near Eddy St.

Pierce-Arrows for San Joaquin Region.

The fortunate conditions now prevailing in the San Joaquin Valley territory and its possibilities as a fertile territory for the sales of high-priced cars have induced the Pierce-Arrow Pacific Sales Co., of San Francisco, to open a branch in Fresno, Cal., in charge of T. E. Neal.

Mohawk Tires on Coast.

The Mohawk Rubber Co.'s factory in Akron, O., the center of the rubber industry, is not famous for its size, quantity production or advertising. It is known primarily for its high standard of material and workmanship. M. E. Mason, sales manager, has devoted over 20 years of his life to selling tires. S. S. Miller, factory manager, has completed his twenty-second year of tire manufacturing. For more than five years he has personally supervised the manufacture of Mohawk "Quality" tires. A very large trade has been built up on the Pacific Coast in the past five years, in spite of the fact that the Mohawk Co. never carried a stock of tires in the West. A branch has just been opened at 1436 Van Ness Avenue, San Francisco, where a large stock of casings and tubes is carried, and it will no longer be necessary for Coast dealers to wait for shipments from the Akron, O., factory. George R. Cowden, who comes from Akron, and has had years of experience in the tire business, is manager of the new branch. His assistant, Mr. Moore, is also from Akron.

Olympian P. C. Rep. Visits East.

J. P. Vain, Pacific Coast representative for the Olympian Motors Co., of Pontiac, Mich., was a visitor at the Chicago show. He also visited the Pontiac factory before his return in company with Pacific Coast distributors of the company.

Standard Eight Agency in Salt Lake.

Charles A. Quigley, of Salt Lake City, Utah, recently contracted for the Standard Eight car agency in his home territory as a result of his visit to the Chicago show. Exemplifying the unpleasant freight conditions that prevail in the inter-mountain territory as well as in other parts of the country, Quigley recently stated that some freight shipped for Salt Lake City, Dec. 21, had yet to be heard from.

Trucks Dominate Spokane Public Wks.

Spokane, Wash., Jan. 28th.—The motor truck has completely supplanted the horse, so far as the public works department of the city of Spokane is concerned. The motor driven equipment has so far outdistanced the horse in cutting overhead expenses. Tractors are used for street grading and plowing and a fleet of 60 motor-driven vehicles are now housed in the city garage.

New Truck Plant at Sunnyvale, Cal.

Sunnyvale, Cal., an agricultural hamlet situated in the vicinity of San Jose, has lately acquired the distinction of a motor truck plant which will build the Rodgers four-wheel drive truck.

The new vehicle will be produced after the design of O. H. Rodgers, the inventor, who is superintendent and vice-president of the company. Joseph Brack, San Francisco banker and local landowner, is president.

Weinstock-Nichols Adds Federal Tire.

Exclusive distribution of Federal tires throughout Southern California and Arizona has been taken by the Weinstock-Nichols Co., of Los Angeles and San Francisco. Simultaneously the company has also acquired the services of C. K. Whittaker as manager of the tire department. Whittaker was formerly connected with the McGraw Tire & Rubber Co., of San Francisco.

Seller Co. in New Building.

The H. A. Seller Co., of San Francisco, handling Signal and Stewart trucks for the Northern California demand, has occupied its new two-story building on Van Ness Ave. The dimensions of the new structure are fifty by one hundred feet.

Harrison Adds Columbia in North.

The Harrison Motor Car Co., of San Francisco, Cal., has secured the Columbia car agency for the Northern California and Nevada territories. Production of the Columbia started in the East some three years ago, but until a few months ago was unknown to the Pacific Coast when it became represented in Southern California.

Carlisle Appoints Coast Dealers.

Reflecting the success of the Carlisle Tire Co. upon the Pacific Coast in its campaign to secure nation-wide distribution of Carlisle Cord tires, the following new dealers have taken the Carlisle line in this section: Tansey-Crowe Co., San Francisco; George W. Eno Rubber Co., Los Angeles; Kimball-Upson Co., Sacramento; Pacific Tire & Rubber Co., Seattle and Portland; and San Jose Auto Supply Co., San Jose, Cal.

New President of Motor Truck Club.

L. J. Hadley was elected president of the Motor Truck Club of California recently, following the resignation of M. M. Priver. The new president formerly held the office of vice-president of the club and is connected with the D. F. Poyer Truck Co., Republic truck dealers.

Poor Joins Pacific Kissel.

R. Karl Poor, formerly sales manager for Arnold-Stelling, of San Francisco, and also at different times connected with Ralph Hamlin and H. L. Arnold, well known motor car dealers in Los Angeles, has joined the Pacific Kissel-Kar Branch.

COCHRANE HEADS COAST U. S. TRUCK

To Represent Big Cincinnati Factory,
With Headquarters in S. F.—Formerly With G.M.C. and Haynes.

Announcement was made at the Chicago National Show of the appointment of W. B. Cochrane as Pacific Coast sales manager for the United States Motor Truck Co. R. S. Stewart, vice-president, and Forrest J. Alvin, general manager, who headed the sales force of the company at the show, made the announcement. Mr. Cochrane was for about six years sales representative of the Haynes Automobile Co. on the Coast, and then became branch manager for the General Motors Truck Co. He made the branch so great a success that it was sold to advantage and Mr. Cochrane took under consideration several offers. After investigation, he took the position offered by the United States Motor Truck Co., for whom he will open an office at San Francisco, and with a sales force cover the Coast. His knowledge of the Coast trade and successful connection with the truck field for many years will make him an invaluable man to the Cincinnati company.

New Appointment in Hartmann Co.

O. E. McCarthy has been appointed sales manager for the Hartmann Motor Sales Co. J. E. Perkins, once connected with the Four-Wheel-Drive Truck Co. on the Pacific Coast, has been appointed by M. M. Hartmann, head of the company, to take charge of the truck department and will supervise the local sales of Selden trucks.

Harroun Enters Spokane Territory.

The four-cylinder Harroun car has entered the Inland Empire with the appointment of H. E. Peterson and A. C. Cartmill as distributors in Spokane, Wash.

Republic Trucks 30 Per Cent in Ore.

Republic internal-gear trucks formed 30 per cent of the total number of trucks sold in Oregon during the year 1917. The truck market in that state is divided between about forty different makes of commercial motor vehicles and out of the total number of 606 sold, 186 were Republic trucks.

Alle S. Hamilton Dies.

Alle S. Hamilton, proprietor of the Los Angeles Ignition Works, Los Angeles, Cal., died recently after an illness of eleven months.



SAN FRANCISCO'S AUDITORIUM IN WHICH PACIFIC AUTOMOBILE SHOW WILL BE HELD. (INSERT) MGR. G. A. WAHLGREEN.

Second Annual Pacific Automobile Show

San Francisco Motor Car Dealers' Association Will Demonstrate to the Industry's Leaders the Importance of the Coast as a Sales Field—More Than One Hundred Exhibitors—Decorations Are Even More Lavish Than They Were Last Year

SAN FRANCISCO'S answer to the argument that the automobile is a non-essential and a luxury will take the form of the largest and most representative display of motor cars, motor trucks and tractors that has ever been gathered together in the West.

The doors will open on this big display at the Exposition Auditorium Saturday evening, February 16, and the Second Annual Pacific Automobile Show will hold the attention not only of the Coast, but of the entire automobile world, for the next nine days.

Over one hundred distributing concerns will display the various makes of passenger cars, trucks and truck attachments which they market. Hundreds of accessories and comfort-making devices will be shown. Insurance companies will have experts on hand to explain the various kinds of automobile insurance and the proper method for motorists to secure protection.

Not only will the display be a magnificent offering of the very latest 1918 models, but it will also be a splendid evidence of the wonders that can be accomplished by skilled artists and designers in creating a brilliant spectacle and the making of a beautiful pageant out of the display of a commercial product and business necessity.

The claim put forth by the men closest to the management that this display will be the most beautiful automobile show ever held in America will be more than justified, and the Coast will receive national recognition as the third greatest automobile center in the country.

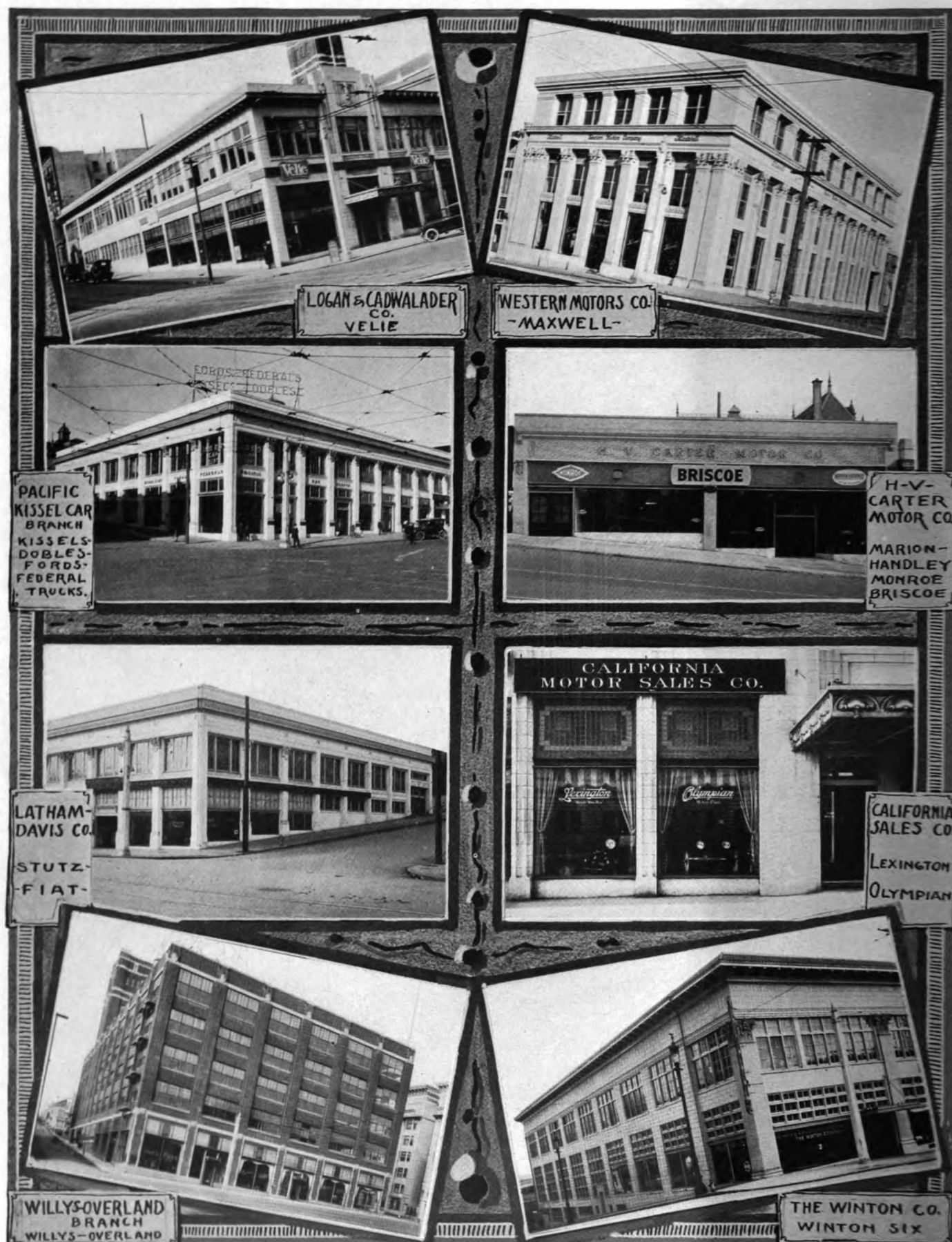
Distributors and dealers from all parts of the Pacific Coast will be on hand to see the big display and to attend the various dealers' conferences which are to be held during show week. Special trains will carry thousands of automobile dealers and motor car enthusiasts into the city for the show week and the festivities that will be held in connection with the big motor event.

A keener interest is being manifested in the big display than ever before, declare those who are closely in touch with the situation, and this, they assert is because the war has brought home most forcibly the fact that the passenger car and the commercial truck are absolutely necessary to the conduct of business during the period of the war, when there must be a conservation of man-power and energy and an increase of business efficiency.

Automobile distributors as well as the manufacturers are aware of this tendency, and in their displays will emphasize the economical features of the engines of the



THE EXAMPLES OF ARCHITECTURE HERE SHOWN ARE TYPICAL OF THE SOLIDITY OF THE AUTOMOBILE BUSINESS IN SAN FRANCISCO. FEW CITIES IN THIS COUNTRY CAN SHOW SO MANY LARGE STRUCTURES DEVOTED SOLELY TO THE SALE OF MOTOR CARS AND MOTOR TRUCKS.



THE GROUP OF FACTORY BRANCH AND AGENCY BUILDINGS DEPICTED ABOVE BEAR OUT THE ASSERTION THAT SAN FRANCISCO'S AUTOMOBILE ROW HAS FEW EQUALS IN THIS COUNTRY. THE WILLYS-OVERLAND, KISSEL, MAXWELL AND WINTON BUILDINGS ARE NOTABLE EXAMPLES.



LACK OF SPACE ALONE PREVENTS THE SHOWING OF MANY ADDITIONAL EXAMPLES OF SPECIALLY CONSTRUCTED BUILDINGS DEVOTED TO SAN FRANCISCO'S GREAT AND GROWING AUTOMOBILE BUSINESS. THE CADILLAC, BUICK AND LOCOMOBILE BUILDINGS HAVE FEW EQUALS ANYWHERE.

EXHIBITORS OF PASSENGER CARS.

The White Company	White
J. W. Leavitt Co.	Oldsmobile and Chevrolet
Peacock Motor Sales Co.	Chandler
L. H. Rose-Chalmers Co.	Chalmers
The Winton Co.	Winton
Chester N. Weaver Co.	Studebaker
Haynes Auto Sales Co.	Haynes
Pacific Nash Motor Co.	Nash
John F. McLain Co.	Franklin
DuBrooy Motor Co.	Mitchell and Saxon
F. J. Linz	National
Greer-Robbins	Hupmobile
Al G. Faulkner	Marmon
Pacific KisselKar	KisselKar, Ford, and Doble Steam Car
Willys-Overland of Calif.	Overland and Willys-Knight
Frank O. Benstrom	Premier and Grant
H. V. Carter Motor Co.	Briscoe, Marion-Handley and Monroe
H. O. Harrison Co.	Dodge Bros. and Hudson
Phillips Dist. Co.	Daniels
A. G. Somerville	Stearns
Howard Automobile Co.	Buick
Harrison Motor Car Co.	Columbia and Peerless 8
J. I. Case Threshing Machine Co.	Case
Paige-Detroit Motor Car Co.	Paige
Mathewson Motor Co.	Allen
Leach-Frayer Motor Co.	Liberty, Dort and King
Arnold-Stelling Co.	Scripps-Booth and Simplex
Pacific Roamer Dist. Co.	Roamer
Logan-Cadwalader Co.	Vellie
Cole Pacific Motor Co.	Cole 8
Western Motors Co.	Maxwell
C. D. Rand	Mercer
Hartmann Motor Sales Agency	Apperson
The Locomobile Co. of America	Locomobile
W. J. Benson Co.	Stephens Silent Six
Don Lee	Cadillac
Latham, Davis & Co.	Stutz
Pierce Arrow Pacific Sales Co.	Pierce Arrow
California Motor Sales Co.	Lexington and Olympian
C. P. Kiel	Westcott
Cunningham Automobile Co.	Cunningham
A. G. Somerville	Oakland and Davis

cars they handle. Those features that get power from every last drop of gasoline, that make low-grade gas perform equally as well as high-grade gas has in the past, and other thrift features will receive their due amount of attention.

On the other hand the beauty of the models shown will not be neglected. Practically every distributor is going to show one or two special jobs in colors with special equipment and special finish, and Milady will have a wide assortment of beautiful models from which to choose her new equipage.

Under the dome of the beautiful Auditorium building with its wonderful decorations these exquisite show cars will be displayed to the best possible advantage, and the thousands who throng the huge structure during show week will have wonderful opportunities to judge not only of the quality of the cars, but of the big interest which is taken by the general public in the annual showing of the products of the Nation's third largest industry.

To indicate the manifold ramifications of the motor car industry, it is a peculiar fact that not only are the automobile men enthusiastic over the plans for the show, but the department store heads, the hotel men, the Advertising Club, the Rotary Club, the Chamber of Commerce and the various civic bodies are helping the big exhibition in every way, and are planning to give out-of-town visitors a wonderful reception during show week.

During the recent national show in Chicago the San Francisco exhibition came in for a great deal of attention, and the big Coast display was conceded to rank third in importance in the country because of the fact that California is such a great motoring state and such a tremendous market for all makes of trucks and passenger cars. San Francisco being the western distributing point for Washington, Oregon, Nevada, Montana, California and the Hawaiian Islands, and the city in which many large Eastern concerns maintain Pacific Coast headquarters, will also add prestige to the coming show.

Many of the big men in the automobile industry have expressed their intention of being on hand for the opening of the show. Special trains are even now en route from Chicago with factory officials and representatives from all over the East.

Decorations Even More Beautiful Than Last Year.

The decorative features of this year's show will, in the opinion of those who have seen the plans, and who know what New York and Chicago offered in this line, far outclass those at the national exhibitions. For months Manager George A. Wahlgreen and his staff of assistants have been working day and night on the decorative details. Herman Rosse, internationally famous as a mural decorator and painter, has concentrated his attention and devoted his talents to the interior decorations, and has promised that they will surpass anything ever seen in this country for beauty, harmony and appropriateness.

Last year Manager Wahlgreen won the praise of the biggest men in the automobile industry for having promoted the best decorated and most artistic exhibition of its kind ever held in the country. But this season the decorative scheme, according to those who have seen the plans, will be more artistic and more elaborate than ever. Beautiful murals, wonderful hanging lanterns and other marvelous effects will feature the setting in which the 1918 models of the various makes of cars will be shown.

Predictions that the exhibition this year will beat even the high attendance record of 100,000 which was set last season, are numerous. There are several reasons for these predictions. One is the increased interest in the exhibition which is being taken by the people living in the smaller cities and town in Northern California. Many of the towns are planning special delegations to attend the exhibit and several have asked that special days be set

EXHIBITORS OF MOTOR TRUCKS.

Goldman Auto Co.	Truck body
Barnett Auto Body Co.	Auto-car
Auto-Car Service & Sales Co.	Kleiber
Kleiber Motor Co.	Truxton attachment, and Brockway truck
Rose-Chalmers Co.	Moreland
Moreland Motor Truck Co.	Maxwell
Western Motors	Kissel and Federal
Kissel Kar Company	Winther and Commerce
California Tractor & Implement Co.	Nash
John F. McLain Co.	Heath Duplex attachment
Nash Pacific Motor Co.	Stewart and Signal
Pacific Heath Duplex Co.	Bethlehem
H. A. Sellers Co.	Doane
Frank Benstrom	Studebaker
Doane Motor Co.	Balston
C. N. Weaver	Doble
Woodward & Lowe	
Doble Steam Car Co.	
United Electric Vehicle Co.	
Hewitt Ludlow Co.	Hewitt Ludlow
H. A. Waterman Co.	
Pacific Car & Foundry Co. (Seattle)	

EXHIBITORS OF ACCESSORIES.

Kohler & Chase.	B. & D. Company.
C. W. Marwedel.	Defender Auto Lock Co.
Auto Theft Signal Co.	American Bureau of Engineering.
Scovel Iron Stores Co.	Automixer Sales Co.
A. G. Somerville.	Aero Cushion Tire Co.
McKee Glass Co.	C. A. Bacon Co.
Individual Underwriting Indemnity Corp.	Automobile Necessities Co.
Westinghouse Air Spring Co.	Leavett & Tufts Co.
Lichtenberger-Ferguson Co.	The Cushman Co.
London & Lancashire Insurance Company.	Superior Tire & Repair Co.
Hoelle Rubber Sales Co.	Double Seal Ring Co.
Lomax & Chapman.	Sierra Sales Co.
Miller Auto Bed Co.	Carbonide Mfg. Co.
N. Y. Lubricating Oil Co.	Champion Spark Plug Co.
Pneumatic Cushion Co.	Pryor's Auto Accessories Co.
Presto Cloth Co.	The Hess-Bright Co.
Gates Half Sole Tire Co.	Ensign Carburetor Co.
Diamond Signal Co.	Advance Automobile Accessories Corp.
Universal Distillate Burner.	Pacific Automobile & Engineering School.
Pacific Pipe Supply Co.	Lawrence Co.

COMPARATIVE REGISTRATIONS IN SAN FRANCISCO'S SALES FIELD DURING 1916 AND 1917.

County.	1916	1917	Increase
Alameda	13,311	18,270	4,959
Alpine	12	15	3
Amador	352	613	261
Butte	1,640	2,323	683
Calaveras	318	480	142
Colusa	638	1,067	429
Contra Costa	1,627	2,401	774
Del Norte	117	163	46
El Dorado	262	409	147
Fresno	7,466	12,264	4,798
Glenn	693	1,025	332
Humboldt	1,432	1,957	525
Kings	1,383	2,332	949
Lake	268	444	176
Lassen	307	449	142
Madera	539	924	385
Marin	1,028	1,400	372
Mariposa	133	174	41
Mendocino	796	1,177	381
Merced	1,106	1,671	565
Modoc	302	375	73
Mono	17	43	26
Monterey	1,418	1,969	551
Napa	984	1,381	397
Nevada	396	528	132
Placer	759	1,149	390
Plumas	216	282	66
Sacramento	5,372	7,089	1,717
San Benito	520	773	253
San Francisco	20,457	30,917	10,460
San Joaquin	4,494	6,450	1,956
San Mateo	1,686	2,171	485
Santa Clara	6,186	8,425	2,239
Santa Cruz	1,404	1,870	466
Shasta	497	784	287
Sierra	80	106	26
Siakiyou	756	1,032	276
Solano	1,268	1,834	566
Sonoma	2,976	4,005	1,029
Stanislaus	2,985	4,409	1,444
Sutter	497	832	335
Tehama	641	967	326
Trinity	57	86	29
Tulare	3,780	5,669	1,889
Tuolumne	447	561	114
Yolo	1,299	1,846	527
Yuba	550	818	268
	93,452	135,889	

aside for their communities. Others are planning on holding economy runs to the city with the prizes being awarded during show week.

Another reason that is assigned for the increased interest in the show is the fact that the passenger car and motor truck are coming into increasing importance since the start of the war and that the public has become educated to the fact that the automobile is a conserver of time and energy and a money-maker par excellence.

For several weeks all the San Francisco distributors have been making special efforts to "doll up" the models which will be shown and to make them as attractive as possible. The cars in special colors, with special upholstery and finish will harmonize well with the beauty of the decorative design.

The motor truck exhibition which is to be held in conjunction with the passenger car display will prove a most interesting feature for the farmers and the business man of the Coast, as it will be the first big event of its kind ever held in the West and will afford them their first opportunity of judging of the various makes of motor trucks, truck attachments and delivery cars under one roof.

As was the case last year it is expected that many large out-of-town contracts will be closed and that many new dealers will be signed during show week by the various big distributing concerns of San Francisco.

The accessory exhibit will also draw its full quota of people and the various accessory dealers and exhibitors will have on display many devices designed to add to the pleasure and the comfort of motoring.

The many establishments in San Francisco devoted to the automobile trade will indicate the dimensions and

stability of the business in the Pacific Coast metropolis. Architecturally the buildings, as may be gathered from a glance at the photographs on other pages of this issue, compare more than favorably with those to be found on the Automobile Row of any city in the United States. Indeed, Van Ness Avenue has been declared by some Eastern automobile men to contain finer structures devoted to the distribution of automobiles than any other street in the country. The photographs show but a small proportion of the buildings which make up San Francisco's Automobile Row, but those shown are typical. The same is true of the headquarters of the many large tire and accessory houses in the city.

The "Motor West" photographer endeavored to snap as many as possible of the leaders of the industry in San Francisco. He was successful in rounding up some two-score of them at various times and places, but they proved to be such a busy lot that it was difficult to locate them. A composite photograph of the result would indicate a keen, energetic physiognomy typical of San Francisco's best business men. True, they are not all Adonises, but they are all workers.

Show Building Largest on the Coast.

The huge Exposition Auditorium in which the Second Annual Pacific Automobile Show will be staged, is the largest building of the kind on the Pacific Coast. Every available inch of the more than 70,000 square feet of space at the disposal of the Show Committee has been disposed of to the 42 passenger car, the 22 motor truck and the 44 accessories exhibitors. In the main hall, 200x190 feet, will be gathered the passenger car exhibits. The decorations of this immense hall have been given the personal supervision of Manager George A. Wahlgreen for the past four months, and the result far outclasses the best efforts of Eastern designers at the New York and Chicago shows.

On either side of the main hall is a smaller hall; each of these is 137x56 feet in dimensions. These smaller halls will also be devoted to passenger car exhibits, and each will have a decorative scheme of its own, but one which will harmonize with the main hall plan. Every inch of space in both these auxiliary halls has been disposed of.

Accessories will hold forth, as was the case last year, on the second floor, the huge corridors surrounding all four sides of the main hall, and the many spacious ante-rooms being filled with exhibits. The accessories display will be by far the most comprehensive ever gathered together on the Pacific Coast, as San Francisco is territorial headquarters for so many large Eastern manufacturers of various devices designed for the comfort and convenience of motorists.

The motor truck exhibition will be especially interesting by reason of the fact that the farmer, the business man and the public generally have become convinced of the absolute necessity of some such aid to make up for the lack of man-power and the scarcity and high price of horses. The speeding up of business is demanded by the Government, and Pacific Coast business men will welcome the opportunity of inspecting the very best examples of motor trucks of various capacities and designs, and suited to every conceivable business purpose. The fact that not a few Pacific Coast concerns will be represented—such as the Barnett, Kleiber, Moreland, Doane, Ralston, Hewitt-Ludlow and several others—will not detract from the interest of the various displays.



W. H. Brown



W. H. Brown



L. E. Townsley



Ray Elliott



Geo. Cadwalader



W. H. Brown



Harold Hartman



W. H. Brown

San Francisco, California

SAN FRANCISCO MOTOR CAR DEALERS' ASSOCIATION

MEMBERS WHO ARE ORGANIZING THE

SECOND ANNUAL PACIFIC AUTOMOBILE SHOW



W. H. Brown



W. H. Brown



W. H. Brown

C.H. Howard Carl F. Gantner W.L. Hughson E.A. Emanuel John F. McLain

Dan Whitman G.A. Boyer P.H. Greer Jake Hirsch

A.C. Somerville W.F. Culberson Jack Eagal C.H. Haynes

Phil Hirsch H.O. Harrison L.M. Field F.L. DuBroy

Frank O. Renstrom A.C. Robbins Fred Linz J.W. Frawley I.J. Morse

**SAN FRANCISCO MOTOR
CAR DEALERS' ASSOCIATION**

MEMBERS WHO ARE
PROMOTING THE
**SECOND ANNUAL
PACIFIC
AUTOMOBILE
SHOW**

C. H. Howard heads Howard Auto Co. Carl F. Gantner handles the Roamer. W. L. Hughson, president of Pacific Kissel-Kar, originated the Pacific Show. E. A. Emanuel is the Cole man. John F. McLain is Franklin representative. Dan Whitman handles the Paige. G. A. Boyer is vice-president of John F. McLain Co. P. H. Greer heads Greer-Robbins Co. Jake Hirsch is a member of Hirsch Motor Co. W. F. Culberson is Pierce-Arrow representative. Jack Eagal is sales director of Pacific Kissel-Kar. A. C. Somerville handles Stearns-Knight. C. H. Haynes heads Haynes Auto Sales Co. Phil Hirsch is the other member of Hirsch Motor Co. H. O. Harrison is president of Harrison Motor Car Co. L. M. Field is manager of F. O. Renstrom Co. F. L. DuBroy heads DuBroy Motor Co. Frank Renstrom is president F. O. Renstrom Co. A. C. Robbins is a member of Greer-Robbins Co. Fred Linz heads Linz Motor Co. J. W. Frawley is with Leach Frawley Co. I. J. Morse is Locomobile mgr.

**GARAGES, CAR AND SUPPLY DEALERS AND REPAIR SHOPS
IN THE SAN FRANCISCO TERRITORY.**

County.	Garages.	Car Dealers.	Repair Shops.	Supply Dealers.
Alameda	77	126	61	88
Amador	6	5	4	7
Butte	18	22	13	21
Calaveras	2	3	3	3
Colusa	11	14	9	11
Contra Costa	19	18	19	13
Del Norte	1	3	1	1
El Dorado	3	5	3	3
Fresno	43	102	36	34
Glenn	9	11	9	9
Humboldt	23	27	24	21
Kings	19	21	13	19
Inyo	14	25	14	16
Lake	4	6	5	5
Lassen	2	5	3	4
Madera	7	9	8	8
Marin	13	15	14	12
Mariposa	1	2	1	1
Mendocino	11	13	9	12
Merced	17	19	14	18
Modoc	8	5	7	7
Mono	1	1	1	1
Monterey	18	21	13	15
Napa	7	14	8	11
Nevada	7	7	9	8
Placer	9	11	8	9
Plumas	1	2	2	2
Sacramento	47	68	34	63
San Benito	9	11	5	7
Santa Cruz	21	25	20	18
San Francisco	211	235	227	204
San Joaquin	49	63	42	51
San Mateo	11	13	8	11
Santa Clara	43	49	36	41
Shasta	9	12	8	10
Sierra	2	1	2	2
Siakiyou	8	13	9	7
Solano	21	18	17	20
Sonoma	34	43	34	28
Stanislaus	37	44	33	35
Sutter	3	2	3	3
Tehama	14	15	12	14
Trinity	1	3	2	3
Tulare	38	42	33	37
Tuolumne	5	4	5	6
Yolo	11	14	9	10
Yuba	10	12	8	10
Totals	935	1219	853	938
Furnished by Automobile Publishing Company, 943 Monadnock Bldg., San Francisco.				

San Francisco as a Distributing Point.

In considering San Francisco as a distribution point for automobiles and sundries, we should take into consideration the transportation facilities which exist to and from San Francisco, and those facilities should have very careful thought. Here are very excellent facilities for the distribution of automobiles to all parts of the State, including water distribution to Santa Barbara, San Diego and San Pedro, and everywhere up and down the length of the Pacific Coast. From any particular location on San Francisco Bay, it is obvious that distribution to the northern counties, such as San Joaquin, Sacramento, Sonoma, Butte, Yolo and Humboldt, all important consuming points, can be made advantageously from San Francisco.

The importance of water transportation from San Francisco, and especially the importance of interior water distribution, cannot be too strongly emphasized. The transportation facilities of the Bay section are, of course, excellent for distribution from a manufacturing plant throughout the entire State. All the railroads—that is, the transcontinental lines—come in to San Francisco, through the Bay Cities, and from San Francisco automobiles are distributed throughout the State and to the Hawaiian Islands and the Orient. Besides the Ford, Chevrolet and Fageol factories, there is talk every day of other factories and assembling plants being established. Among the makers of motor trucks in the San Francisco territory are the Fageol, Chevrolet, De Martini, Doane, Hewitt-Ludlow and Kleiber.

An important factor in considering the manufacturing

end and distribution end is the climatic condition about San Francisco and the Bay region. The absence of heat in summer and severe cold in winter makes the region in and about San Francisco probably one of the most valuable manufacturing centers in the country, on account of the increased efficiency per employee throughout the year due to the fact that there is practically no loss of energy on account of extreme heat or extreme cold, and being a valuable manufacturing center is naturally a valuable distributing point.

Many Sales Conferences Scheduled for Show Week

A score or more of dealers' conferences have already been arranged for during the week. Big distributors will take advantage of the fact that many of the Eastern officials of the companies they represent will be on hand for the show, and have invited all of their out-of-town representatives to be on hand not only for the show but for the sales conferences.

L. H. Rose, president of the L. H. Rose-Chalmers Co., has called a meeting of Northern California Chalmers representatives for Friday.

P. H. Greer, of the Greer-Robbins Co., state distributor for Hupmobile cars, has called a meeting of the Hupmobile distributors and dealers in the state for Thursday.

Al G. Faulkner, state Marmon distributor, will hold a special conference which will be attended by F. E. Macovics, vice-president of the Nordyke & Marmon Co., and all the State Marmon dealers.

Jake Hirsch, of the Hirsch Motor Co., Coast distributor for the Truxton unit, a truck attachment, has called for a conference with every Truxton dealer in four States, and a conclave will be held on Friday.

W. C. Logan, of the Logan-Cadwallader Co., Velie distributor, has arranged for a meeting of all Velie distributors, and a special sales campaign will be discussed at the conference.

John F. McLain, head of the John F. McLain Co., distributors for the Franklin car, is planning a special meeting of dealers to discuss the features of the new Series Franklin thrift cars.

H. O. Harrison, of the Harrison Motor Co., has called a convention of dealers handling Hudson and Dodge cars.

The Howard Automobile Co. is planning a special meeting of Buick distributors, and everything is prepared for a big meeting with prospects and selling plans as the topics for discussion.

The United States Rubber Co. officials had a big conference this week at the Palace Hotel which was attended by over one hundred representatives from all parts of the Coast. The majority of these men are staying over for the show.

Sales Manager F. W. Hauger, of the Haynes Auto Sales Co., has called a meeting of all Haynes representatives for Thursday or Friday.

The Don Lee Co., Cadillac distributors, will hold a conference with dealers during the week.

The H. V. Carter Co., Briscoe distributors, will hold special meetings with factory representatives and Coast dealers.

Safford, Ariz.—McInroy & Ferguson have secured the Gila and Graham counties agency from the Leach Motor Car Co. of Los Angeles and will sell Dort, Liberty, Premier and King cars.



BEAUTIFUL CURVING BEACH OF BOLINAS BAY, MARIN COUNTY, IS ONE OF THE MANY BEAUTIFUL VIEWS FROM HEIGHTS.

San Francisco Hub of Central California Touring

No Section of the Country is More Fortunately Situated as Regards Good Roads and Natural Attractions—Many World-Famous Scenic Marvels are Located Within a Half-Day's Drive of Golden Gate—Outline of Some of the More Popular Trips

NATURE gave Central California most of the natural and scenic wonders that make the Golden State a lure to all the world and a climate which permits the traveler to see and enjoy both at all seasons. These, in combination with the wonderful roads, makes San Francisco a center for motor touring from one year's end to the other.

The motorist starting from San Francisco and the Bay Cities has a choice of a series of tours which will acquaint him with the beauties of the valleys to the north, east and south of San Francisco Bay; the majesty of the California redwoods; the charm of the "magic coast line"; the peace and calm of the old missions, and the grandeur of Yosemite and Lake Tahoe.

The motorist in San Francisco is fortunate in that with a few minutes' travel he can motor into beautiful suburban territory, and thence in an equally short space of time into scenes of remarkable sylvan beauty. The tour of Half-Moon Bay via La Honda Canyon is an illustration. The route lays through Burlingame and San Mateo, whence a turn to the right over the hills brings the traveler to Half-Moon Bay on the shores of the mighty Pacific. After a run along the road parallel to the ocean via San Gregorio, Pescadero is reached, where a turn to the left through Pescadero Canyon through a most beautiful scenic country brings the tourist to La Honda. It is a nine-mile climb to the summit. The return to San Francisco is via Portola Valley and Menlo Park.

The foothill and canyon tour through Castro and Livermore Valleys offers a great variety of scenery, over roads that are uniformly good and of easy grade. The real start of this trip is from Oakland, whence the Foothill Boulevard is followed to Lake Chabot, where a splendid panorama of San Francisco Bay may be had. Skirting the lake the road, which is a portion of the Lincoln Highway, leads through Dublin Canyon to Dublin and thence to Sunol. At this point a turn to the right brings the tourist into Niles Canyon and after five miles of the most picturesque going, to the town of Niles. The homeward route leads through Alvarado and San Leandro. The mileage of this trip is approximately 70 miles.

The trip around San Francisco Bay follows the western side of San Francisco Bay to Burlingame, San Mateo, Redwood, Palo Alto and Los Altos to San Jose. After lunch at San Jose the homeward route leads through Milpitas and Warm Springs, where a turn to the right brings the tourist to the Mission San Jose. Thence the road leads through Niles, Hayward and San Leandro to the ferry at Oakland. This is a 135-mile trip.

Another ideal short outing is the trip through picturesque Marin County. After ferrying to Sausalito, the State Highway is followed along the shores of Richardson's Bay to San Anselmo, the route being at all times within the shadow of Mt. Tamalpais. From San Anselmo one can go via Fairfax, either direct to Bolinas, or north to Tocaloma, Pt. Reyes, Inverness and the Pt. Reyes

lighthouse. The return route is identical as far back as Olema, whence a turn to the right brings the traveler to the ocean shore road to Bolinas. From the latter point the favorite route is through Willow Camp, still paralleling the ocean, with Mt. Tamalpais on the left, to Sausalito. This trip may easily be made in an afternoon, as it is only 73 miles.

An extension of the Tomales-Inverness-Bolinas tour to the big redwoods along the Russian River forms an ideal week-end outing. From the town of Pt. Reyes, continue north to Tomales and Monte Rio, where the Russian River is crossed. Turning to the left through Jenner to Guerneville the road leads up the Russian River Valley to Fulton and Santa Rosa, where a turn to the right starts the tourist on the homeward journey through Petaluma, Novato and San Rafael to Sausalito, thence by ferry to San Francisco.

The tour along the shores of the Pacific to Santa Cruz and Monterey Bay is known the world over for the re-

jagged group of volcanic rocks in San Benito County. On arriving at San Juan a turn to the right leads to Hollister, where another right turn through Tres Pinos and Paicines brings the traveler to the little town of Cook, where a turn to the right into the hills for about 20 miles brings the famous Pinnacles into sight. Some of these peaks tower 1500 feet into the air, and the battle-mented precipices, scored with ravines and gorges and pock-marked with mysterious caves, are veiled in the rainy season with many waterfalls. Returning by the same route to Hollister, the route lies through Gilroy and San Jose, where a choice of routes is given to San Francisco. The round trip is about 350 miles.

A few miles north of Santa Cruz lies the famous California Redwood Park, a great forest of big trees that are famous the world over. The Big Basin, another natural wonder—a great bowl scooped out of the Santa Cruz Mountains—is another attraction to the motorist.

The tour to the Petrified Forest through the beautiful Napa Valley abounds in scenic marvels without number.



SAN MATEO COUNTY DRIVES ARE WALLED BY EUCALYPTI AND OAK TREES.

ON THE OUTSKIRTS OF THE REDWOODS SECTION IN HEART OF NAPA COUNTY.

THE MARIPOSA GROVE OF BIG TREES IN YOSEMITE IS TRULY A SCENIC MARVEL.

markable scenic beauties to be encountered throughout the entire round trip. Half-Moon Bay is reached over the new shore road and thence paralleling the mighty Pacific the route leads through Purissima, San Gregorio, Pescadero, Swanton and Davenport to Santa Cruz, the famous resort city on the shore of Monterey Bay. Continuing around the Bay, the road leads through Watsonville, Castroville and Salinas to Monterey and Pacific Grove. Here the wonderful "17-mile drive" is encountered, famous the world over for its numerous beautiful outlooks, the Carmel Mission, Hotel Del Monte and its golf links and other attractions. On the homeward trip a turn to the right in Salinas will bring the tourist through San Juan Pass to the pretty town of San Juan and its old mission. Then following the Chittenden cut-off to Gilroy, the route lies through Morgan Hill and Edenvale to San Jose and thence to San Francisco or Oakland.

The tour to Santa Cruz and Monterey offers the possibility of an extension of the trip to the Pinnacles, a

Starting from Oakland the route lies through Walnut Creek, Concord and Pacheco to Martinez, where the ferry is taken to Benicia, at one time the capital of the state of California. From Benicia the road skirts the shore of San Pablo Bay to Vallejo, opposite the Mare Island Navy Yard. Due north stretches the beautiful road to St. Helena, with broad orchards carpeting the ample floor of the valley to the foothills. Still farther north lies Calistoga, where a turn to the left brings the traveler to the Petrified Forest. The return trip may be made either by way of Vallejo, where a ferry can be had to San Francisco, or by way of Santa Rosa, Petaluma, San Rafael, and Sausalito, and thence by ferry to San Francisco. The round trip approximates 150 miles.

For those who delight in a swift ride through an agricultural section, the trip through Solano County to the State Farm at Davis is most enchanting. Starting from Oakland, the State Highway is followed to Martinez where the ferry is taken to Benicia. Thence the route lies



PICTURESQUE ROAD ALONG TOMALES BAY, MARIN COUNTY.



PINES ON MONTEREY PENINSULA, NEAR DEL MONTE.

through Cordelia, Fairfield, Vacaville and Dixon to Davis. Upon arriving at Cordelia on the homeward trip, a turn to the right at Napa Junction and thence to Vallejo will permit of a long ferry trip through San Pablo Bay to San Francisco.

The Crystal Springs-Portola Valley tour, 80 miles round trip, makes an ideal half-day's outing. The State Highway is followed through San Bruno to Millbrae, where a turn to the right leads through delightfully wooded hills to the summit of the ridge forming the eastern boundary of San Andreas. Passing Crystal Spring Lakes and Woodside, the road leads through the beautiful Portola Valley, passing many summer camps among the redwoods. Continuing, Stanford University is reached, and later Palo Alto, whence a return by the State Highway to San Francisco is a familiar journey. The round trip is about 80 miles.

Another favorite half-day trip for the motorists of the Bay Cities is that to Mt. Diablo, which is only 17 miles east of Oakland. The accepted route is via the Tunnel Road through Walnut Creek. The mountain stands up out of the plain like a sentinel, it being the only elevation for many miles round about.

Just across the Golden Gate, within the shadow of Mt. Tamalpais, lie the Muir Woods. A good road leads through the forest, beneath the huge Sequoia Semper-virens, some of which are 250 feet high and from 30 to 40 feet in circumference.

The Lick Observatory on Mt. Hamilton, about 13 miles from the beginning of the Mt. Hamilton road out of San Jose, is also a favorite objective point of Bay Cities motorists. Mt. Hamilton is 4209 feet high and dominates the entire surrounding country. The road to the top from Smith's Creek hotel, although only 7 miles in length, has no fewer than 62 curves, but the grade is easy and the scenery delightful. Other tours out of San Jose may be taken to Alum Rock Park, a picturesque canyon resort 6 miles from the city; to Los Gatos and the old quicksilver mines at New Almaden; to Watsonville via the beautiful Mt. Madonna road, and numerous others.

There are now open three main roads to Yosemite Valley—the Coulterville, Big Oak Flat and Wawona. The Wawona road, by reason of its easy gradients and its impressive views of the Valley, is recommended for the trip in, and the Big Oak Flat road for the return trip, as far as Crane Flat. From Wawona it is but a short run over good roads to the Mariposa Grove of Big Trees, one of wonders of the world. From Wawona into the Yosemite proper is a run of 26 miles, through deep gorges and shadowy canyons, in the midst of a country teeming with game.

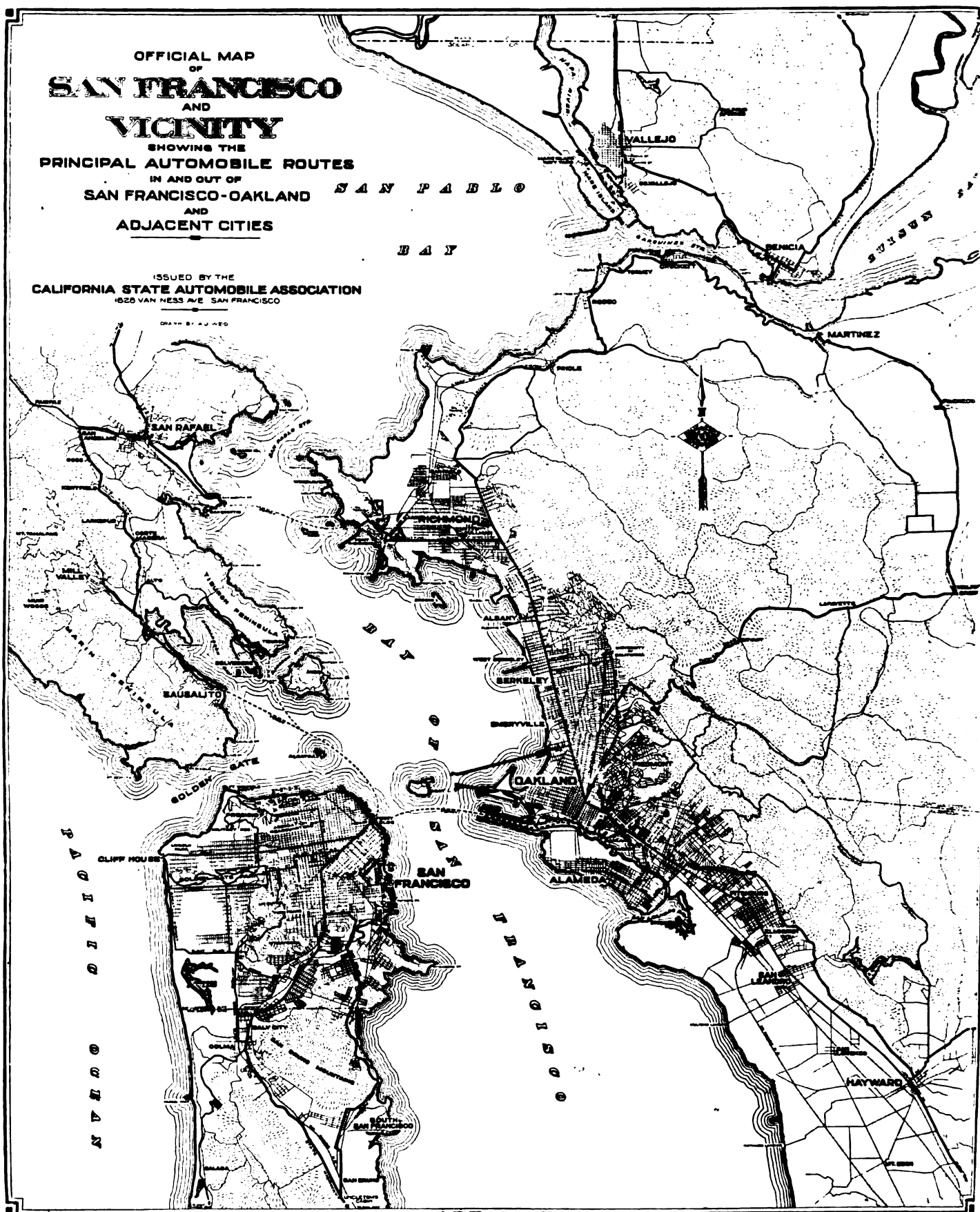
If traveling from the north the motorist will naturally use the Big Oak Flat Road in driving to Yosemite. That route starts at the city of Stockton, though there is also an excellent connection from Modesto, and the road passes



AMONG THE CRAGGY PINNACLES, IN SAN BENITO COUNTY.



CYPRESS POINT, ON MONTEREY'S "17-MILE DRIVE."



through Knights Ferry, Groveland and Sequoia, reaching an altitude of 7250 feet before arriving at Yosemite. One of the special attractions of this road is the Tuolumne grove of "Big Trees" and the magnificent timber through

which the road passes throughout its entire length after reaching an altitude of 4000 feet. As an adjunct to this road, the Tioga trans-Sierra route, leaving the Big Oak Flat road about four miles east of Sequoia, affords an op-

portunity for the motorist to drive his car to the summit of Tioga Pass at an elevation of 9941 feet.

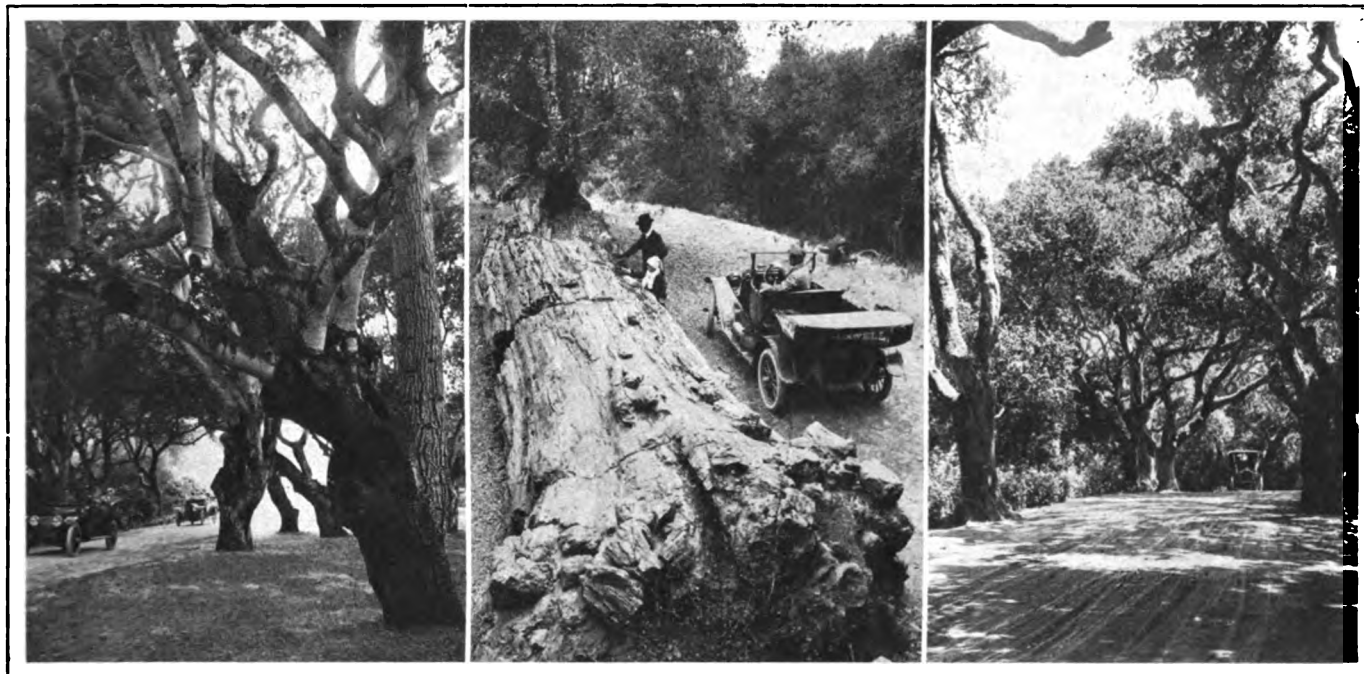
Coming into Yosemite from the south, the motorist has the choice of three roads leading from Fresno. The road to Wawona, which passes through the towns of Coarse Gold, Fresno Flats and Sugar Pine Ridge, is generally conceded to be the best. This route will be greatly enjoyed by those who take interest in that period of California's history when the discovery of gold made, overnight, cities out of barren flats.

A route which for years was the busiest stage line into Yosemite Valley, is that from Madera through Miami Lodge to Wawona.

One of the great advantages enjoyed by the Wawona route is the Mariposa Grove of Big Trees, probably the most celebrated group of Sequoia Gigantea in the United States; also the fact that driving into Yosemite Valley by way of Wawona, the motorist can divert from that road and drive his car directly to Glacier Point, where the

miss. From Oakland, the route leads via the Foothill Boulevard to Hayward, Dublin Canyon and Livermore, and thence to Stockton. Lincoln Highway signs point the way north to Sacramento, thence east via Roseville to Auburn. At Auburn the climb into the foothills is begun, and 17½ miles of steady ascent brings the tourist to Colfax. At Summit an altitude of more than 7,000 feet has been reached, and a magnificent view of the snow-clad ranges is spread before the eye. From this point there is a steady descent to Donner Lake, named for the ill-fated Donner party of pioneers. Truckee, the next town, is the seat of the winter snow carnival. Here the road leaves the Lincoln Highway and follows the canyon of the Truckee River for 14 miles to Lake Tahoe.

The "Grand Tour" of the Central California counties is one of the most interesting, instructive and attractive in America. It touches many of the notable scenic features and the natural wonders of California—the big trees, the sea coast, old Missions, valleys and mountains—and



WONDERFUL OAKS AT DEL MONTE,
SOUTH OF SAN FRANCISCO.

WONDERFUL PETRIFIED FOREST
IN SONOMA COUNTY.

BEAUTIFUL DRIVE IN SAN MATEO
COUNTY, NEAR BURLINGAME

overhanging rock, protruding above the abyss 3200 feet above the valley floor, has made this one of the most celebrated view-points on the walls of Yosemite Valley.

Still another advantage enjoyed by the Wawona route especially for the motoring public, is the fact that in driving to the Valley over that road, the most celebrated view of Yosemite is enjoyed when passing Inspiration Point. As the motorist approaches Inspiration Point the road clings to the very edge of Merced Canyons, 3000 feet or more above the bottom of the gorge. From Inspiration Point may be enjoyed a view of three of the noted features of Yosemite Valley. To the right is Bridal Veil Falls, 908 feet of sheer drop. In the center distance, is the celebrated Half Dome, piercing the upper reaches nearly one mile in height above the Valley floor. To the left, and more immediately in the foreground, looms the largest single block of granite in the world—El Capitan, its wall towering 3780 feet above the Valley floor.

The tour to Lake Tahoe is one that no motorist should

traverse thirteen counties. Six days should be given to the tour—three days to the section south of San Francisco Bay and three to the north—the trip approximating 600 miles.

From San Francisco the route lies through San Mateo and Santa Clara counties to Los Gatos; thence through the Santa Cruz mountains to the coast city of Santa Cruz; via Watsonville and Salinas to the Monterey peninsula and its wonderful coast drives. Returning north: Monterey to Salinas, Old Mission San Juan, Hollister, Gilroy, San Jose, Mission San Jose, Niles, Hayward to Oakland.

The second section begins at Oakland and follows the State Highway to Martinez; thence by ferry to Benicia; Vallejo, Napa, St. Helena to Calistoga. Here the road climbs Mt. St. Helena and drops into that region of mineral springs, lakes and forests—Lake county. Through Middletown, Kelseyville and Highland Springs the route lies over the Pieta grade to the Russian River and thence home through Cloverdale and Geyserville.

Aftermath of Chicago Show

Plenty of Business in Evidence Despite Bad Weather and the Garfield Closing Order—Confidence Restored

CHICAGO, FEBRUARY 2.—The eighteenth annual automobile show closed to-night. Attendance was far above expectations, with allowance made for the idle Monday. Sales were excellent and prospects numerous.

From the information gleaned from reliable sources, it seems practically certain that there are not going to be manufactured a sufficient number of passenger cars this year and that the shortage is going to be serious. Dealers are preparing to weather the shortage of passenger cars by taking on truck agencies and by looking carefully into the tractor field, in which the dealer is going to take a prominent part in spite of early predictions that the tractor would be handled by the implement dealers. The latter class of merchants knows little or nothing of the gasoline motor and the automobile man has business with the farmer in the passenger car and the motor truck field and with the sales in those two fields will logically take on the tractor and win success also, employing his sales force until after the war in the truck and tractor fields.

As indicating the falsity of claims of slack business, Thomas J. Toner, of the Maxwell-Chalmers combination, said that the reports of business done in America by the makers the last three months of 1917 showed a gain of \$30,000,000 over the last three months of 1916.

Each day of the show has brought new accounts of business taken for the government. The automobile and parts and accessory makers have added millions of dollars' worth of war business within a short time and have taken literally the admonition of the government to trim outputs of passenger cars and do other work.

The real necessity of a motor truck exposition was never better exemplified than during the week, with trucks standing in long lines all around the show buildings, playing side show to the passenger car exhibit. No year ever saw more of this sort of thing and no business of the prominence of the motor truck industry should again be forced to do the side-show act.

Chicago is always a hot-bed for business, and more dealers and distributors were on hand this year than ever. They came to Chicago in greater numbers than to the New York show, and this year saw New York completely outdone from the standpoint of business done. Chicago is at the very closest point of contact with the great farming district and with the sections of the country where the big business of the year will be done. The South, Middle West, Southwest and West, including the Pacific Coast, are all good business sections for the motor car people, and there was a banner attendance of the men who sell cars.

The Chicago show opened the eyes of a lot of people. The number of dealers on hand, the large number of distributors present and the cry for cars aroused the manufacturers to the fact that the United States is going to show to just as much advantage in the amount of business done with the war on as did Canada after the war broke out. Canadian business trebled and yet Canada

gave a greater proportion of its population to the war than the United States will ever be called upon to give, and also gave more of its wealth. The placing in circulation of so much money in America through war activities, the high wages placing workingmen in position to buy cars and the great field created in that way for cars up to \$1,000 and even up to \$1,500, with the fact that those who would ordinarily buy the higher-priced cars are buying in the lower-priced field, has brought demands which the makers are never going to meet.

There was much concern manifested on all sides for fear that it will be impossible to secure materials. Many have said that new companies entering the field would never be able to get materials, yet H. J. Wells, chief engineer of the Texas Motor Car Corporation of Fort Worth, Tex., found that he could secure all the material he desired and that this was the case because of cancellations by some of the big makers. This company has 7,000 cars contracted for, and went right ahead in spite of croakings which reached it from the East. Being on the ground in a section carpeted with money, it foresaw a shortage of cars from the old and well established makers and it is now preparing to reap the harvest in the automobile field, as the farmers of its district have reaped the harvest from their fields.

Summing up, the men who investigated thoroughly found that gasoline was not going to be short, that steel except certain alloys replaceable by other materials and other commodities was not going to run short, and they therefore express no fears that the third largest industry in the world is going to be strangled by the government which needs that industry.

What proportion of automobiles as compared to last year will be made could not be estimated correctly, but it seemed to be the general opinion that the output will be not over 70 per cent of the total possible and that it may be less. In that event the wise men point to a certain shortage of cars, and somehow Canada, and the increased buying there after the war started, comes up again and again as a means of comparison and of real tangible proof that America will want more cars than ever. The makers, of course, have no cause to worry, as their capacity is taken for the manufacture of war materials of all sorts. The dealers are the men who are pondering the matter and they are the men who are seeking the outlet, the source for business to take the place of the falling off of the passenger car trade. Many are turning to the motor truck, and representatives of all of the big motor truck companies were more in evidence at the show than ever before and all did business—with the passenger car dealers. Many agencies for trucks were sought for and were placed, and the men who make the business wagons are not worrying, for the needs of the time are not going to allow such a curtailment of materials for the truck men as promises to be the case with makers of passenger cars. Trucks must aid the railroads to solve the problem of freight transportation; trucks must do the work that the railroads cannot do; trucks must keep business going, and the government knows this, while the dealers realize that the business interests of the country will have to be supplied. Many passenger car dealers in the past have fought shy of the motor truck; but times are changed, and each day brings news of exclusive dealers in passenger cars who have added trucks to their lines, and plan larger business.

The show opened on Saturday night, without the usual crowd of tradesmen being on hand, however. Thousands of men from all sections of the country spent from 24 to 48 hours on the road owing to the fierce blizzard which raged all day and lasted far into the night. The Detroiters, who had started Friday night, reached their hotels early Sunday morning and went to bed. Many other contingents did not come till Tuesday, having learned that the Garfield order would necessitate the closing of the show on Monday. Many exhibits held back by the blizzard and train delays were not installed until Tuesday.

The Illinois fuel administration recommended that the coalless Monday order be suspended as far as this particular event was concerned, but Washington officials informed the management that no exception could be made. The authorities did, however, give permission to close Monday instead of Tuesday although the show is operated under an amusement license and amusements were all closed Tuesday. This fact alone gave to the show on Tuesday an attendance the like of which has never been known. Monday's loss in attendance was probably more than made up by the banner attendance of the second day of the week.

The Monday lay-off was a good thing in more ways than one, for it gave opportunity for the men of the trade to get together as they would not have done had the show been on. Sales representatives traveling in every state of the union, men of official position in the factories and a fair smattering of the manufacturers, with distributors and dealers from everywhere in the world, including European countries and the Antipodes, talked of the future of the industry. The optimism of the many representatives of the Middle West, the great Southwest, the Far West and the South put a damper on the calamity howler as nothing else could do.

The consensus of opinion seemed to indicate that the automobile business is going to be good in 1918, and that it is going to be better by far than some of the most optimistic had believed possible. The car shortage, it was admitted, is going to be serious, for cars enough are not going to be manufactured. Everyone, however, agreed that the war must go on to a successful finish and everyone believes that the motor car industry is going to aid in making the cause of the Allies successful. All hands will go on doing what motor car business there is to do with the cars which may be manufactured, and predict that the close of the war will be followed by great prosperity in the motor car field, for America will have to supply the world with automobiles and motor trucks.

Announcement of the Ramage process of tripling the supply of gasoline from crude oil was the talk of the show and there was a general feeling of confidence among the industry's high-lights that the supply of gasoline will much more than equal the demand. One of the features of the social activities in connection with the Chicago Show was the War Dinner at the New Morrison Hotel. Friday, February 1st. Over 1300 tickets were sold, and the dinner was one of the most successful in the history of the Society of Automotive Engineers. To David Beecroft, chairman of the Meetings Committee, much of the success of the affair is due.

The Tractor Meeting, held at the Sherman on the afternoon of the same day, was also under the management of Mr. Beecroft's Meetings Committee. The fact that the tractor is a recognized factor in the war was responsible

in great measure for the intense interest manifested in this meeting. The fundamentals of tractor design were taken up under three heads, viz.: "The Fundamentals of General Tractor Design;" "The Fundamentals of Tractor Engine Design," and "The Fundamentals of Tractor Transmission Design." W. N. Smith, of the Monarch Tractor Co., Watertown, Wis., started the discussion in connection with these papers, and a number of other tractor engineers participated in the proceedings.

Banquets and luncheons featured the week. The Elgin Motor Car Corporation gave two luncheons Wednesday, one at noon for the dealers and one at 6:30 for the parts and accessory makers who supply the company. C. S. Rieman, vice-president and general manager of the company, presided. The Velie Motors Co., and the Nash Motors Co., gave luncheons to their dealers on Wednesday, and the Nash Motors Co. had a dinner Tuesday also. The Franklin, Maxwell and Paige-Detroit companies had their dinners Thursday.

The Automobile Salon in the Elizabethian room of the Congress Hotel, opened Monday despite the fuel order. There were ten lines of cars shown and some surprises in body work were in evidence. There was an automobile show at the Edgewater Beach Hotel during the week and motor truck shows in many hotels with quite a sprinkling of passenger car exhibits of a private nature. Some parts and accessory exhibits were also noticed in odd corners and quite a number of displays at headquarters of companies who do not exhibit at the national show.

A census of the show Saturday night showed 350 exhibits of which 87 displayed gasoline cars, four showed electrics and two steam cars. There were 400 cars in all on display, and at a rough estimate the value of the exhibits totaled \$3,500,000. The total floor space of the Coliseum, Annex, Greer building and First Regiment Armory is 94,000 square feet.

Service flags were everywhere to be seen, indicating that the automobile manufacturing trade of America has contributed largely to the war, probably to a greater extent than any other industry. Many men of the industry who have joined the colors arranged furloughs to allow them to attend, and uniforms were in evidence on all sides.

Under the title "A New Era in Automobile Headlighting," the Corning Glass Works, Corning, N. Y., has issued a large sized booklet detailing, with the aid of many excellent illustrations, the advantages of the Corning Conaphore, the new scientific headlight glass. The pamphlet was prepared by the J. Walter Thompson Co., New York.

HOW I WOULD PURCHASE AN AUTOMOBILE.

By W. L. HUGHSON.

I would first determine the different uses to which I would put it. Then I would analyze those uses to ascertain the features necessary in an automobile to successfully meet them. This would show up its adaptability and utility.

Next I would acquaint myself with the reputation and prestige of the maker. I would make sure that the manufacturer was a permanent fixture in the automobile industry. This would protect me during the length of time that I owned the car. I would know that I was not purchasing a car that was liable to become an "orphan."

Then I would look ahead six months, because, not being able to afford two cars, the one car would have to give me the utility, style and efficiency of two cars.

I would then inspect and compare those features that insure comfort, performance, service and economical maintenance.

I would want the car to have a good appearance, not expensive-looking, but capable-looking. I would want it to have exclusive, not commonplace, looks.

Such a car would not only reflect my good judgment in automobiles, but would also fully meet my requirements and in doing that, it would prove the best investment I could possibly make for increased personal efficiency and economy.

Motor West

LOS ANGELES-SAN FRANCISCO-PORTLAND-SEATTLE

The Motoring Authority of the Pacific Coast.
Established 1907.

An Illustrated Automobile Magazine of Quality, Issued Semi-Monthly.

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February 15, 1918

Motor Trucks in Parcel Post Service

RECENTLY the Post Office Department has taken a deep interest in the progress of highway improvement, the development of the motor truck and methods of utilizing both. There has been a reduction of farm production owing to the draft of man-power into war service at a time when it is imperative that production should be increased. More convenient transportation would stimulate production. Although somewhat late in starting, the Post Office is endeavoring to overcome this loss through the "farm-to-table" movement.

The only way to demonstrate to the producers that it is worth while to increase production, is to put some visible means of communication before him, and that is by establishing motor truck parcels post routes. Such a scheme will aid producers and eventually reduce the cost of living. In some instances no fewer than fourteen handlings are now required to deliver eggs from the producer in the suburbs of a large city to the consumer, in the city itself; yet we wonder at the high price of hen-fruit. As against this, but six handlings are required when eggs are shipped by motor truck between New York and Philadelphia.

There are approximately 2,200,000 miles of public road in the United States, on more than half of which there is no mail service, and 156,000 miles of improved road, on 120,000 miles of which there is no service. To develop the farm-to-table movement it is only necessary to take advantage of highways already existing and improved.

Five years ago at a public dinner in New York, J. I. Blakeslee, Fourth Assistant Postmaster-General of the United States, proposed a chain of motor mail routes from New York to San Francisco and it was treated as a monumental joke. Today it will be difficult for the country to present arguments why similar routes should not be operated in many sections of the country.

Many truck gardeners within 10 to 15 miles of cities drive to the markets with loads of produce and think this

a cheap way of marketing. They do not think of their time and that of their horses as worth anything, as they pay out nothing in cash. But how about the farmers 20 to 30 miles out? These are the producers the Post Office is going after. To enlarge the delivery zone of the city it must establish routes 50 to 100 miles out into territory where farmers are not producing their utmost.

An emergency confronts the country, and daily transportation must be put before the farmer to stimulate production. The motor truck is not confined to fixed rails or routes, but can travel roundabout to avoid delays. Roads must be improved, and the most permanent type of road is cheapest in the long run, as the matter of upkeep is involved. There is a class of citizens who say the Government should not encourage use of trucks on improved roads because they injure them, but the Post Office cannot see the logic of investing money in roads that are not going to be utilized to the utmost.

Some people are skeptical about motor truck postal routes reducing the cost of living. They say that when direct shipping means is supplied, the producer will at once raise his prices to conform with prices in the city. But sooner or later some of the producers will shade prices a bit, then others will follow until prices begin to pyramid downward instead of upward. They have been increasing for the last ten years and it will take time for them to come down. Somebody is controlling prices now, but with direct producer-to-consumer service the market cannot continue to be controlled.

As the Post Office Department develops its plans, a market will be created for motor trucks which will tax the productive capacity of the manufacturers. It is therefore essential to standardize some type of truck for the contemplated service, in order to insure quantity production.

Gasoline Plentiful and Car Production to Be Normal

THE UNITED STATES is the world's largest oil-producing country. Crude oil is transported from the Pennsylvania fields to oil refineries on the Atlantic seaboard in underground pipe lines and from the Oklahoma and Texas fields to Chicago and from the California fields to the Coast in the same way, so railroad freight congestion does not interfere much with the supply. Government departments declare there is sufficient gasoline and other liquid fuels for all requirements, provided care is used to avoid waste, and there is and has been no intention to curtail use of motor cars by limiting the amounts sold.

Manufacturing facilities of the 550 automobile factories and 1,080 parts and accessories plants in the United States are so enormous that there is no need for the government to commandeer factories for production of war materials. Careful investigation of the situation in Washington by the Automobile Industries Committee has shown that the factories can take on all war orders available without seriously interfering with production of either passenger or commercial vehicles.

In the present shortage of transportation facilities, the motor truck and the automobile are recognized as important factors in keeping the industry and commerce of the country in full swing. If the national emergency called for stoppage of the production and use of motor cars, manufacturers and owners would undoubtedly conform with the necessity patriotically, but the need of

greater transportation facilities and of increased efficiency and production on the farms and in the factories calls for the utmost utilitarian employment of the motor vehicle as a time-saving and labor-saving mechanism.

How Farmers Use Their Motor Cars

That farmers use their automobiles principally for business purposes and consider them a necessary part of the equipment of their farms is shown by an investigation conducted in Livingston County, Ill., among owners of two leading makes of automobiles, one selling from \$650 to \$850 and the other at \$1,650. Of 88 farmer-owners, 63, or 73 1/5 per cent, bought their cars as necessary farm equipment; 21, or 24 2/5 per cent, bought them for business and pleasure, while only two said they bought them primarily for pleasure. Asked what percentage of the use of their cars was for business, twenty-two said 95 per cent, twenty, 90 per cent, and ten, 70 per cent. The average of all replies was 82 per cent. The average distance the 88 farmers drove their cars was 2,934 miles a year. Average value of the farms in Livingston County is more than \$30,000. Results of the investigation there may be considered typical of the way farmers throughout the country use their cars.

Lincoln Highway Open Through West

Pleasantly contrasted with reports from the east of extreme cold and heavy snows blocking all rail and highway traffic, is the report of Hamilton Orr, of Orr's Ranch, local consul for the Lincoln Highway Association, to the effect that weather on the desert section of the Lincoln Highway to the west of Salt Lake City is that of spring and that the Highway is dry and fine and open to all travel. A tourist's automobile arrived at Orr's Ranch on the last day of 1917, having traveled from the Pacific Coast over the Sierra Nevada Mountains, eastward bound. This establishes a record of automobile travel in the West, as the Lincoln Highway near the Nevada-California line has always been deep in snow at this time of the year.

Road-Building Policy of the Government

Secretary Houston, of the Department of Agriculture, has set forth squarely the policy which he thinks should be followed in highway construction during the war, as follows:

"So far as it is practicable to do so, this department will urge the maintenance of the highways already constructed; the construction and completion of those highways which are vitally important because of their bearing upon the war situation or for the movement of commodities; the postponement of all highway construction relatively less essential or not based upon important military or economic needs. The department is preparing to suggest to the State highway departments the preparation of a schedule of work for the Federal aid projects for 1918 in line with this policy."

In carrying out the policy thus announced there has been sent out by the Office of Public Roads, of the Department of Agriculture, schedule forms on which the States are requested to set forth their proposed Federal aid work for the 1918 working season. These schedules call for a description of each road, the character, quantity and rail haul of the materials to be used, the probable

cost, the amount of Federal funds desired, the specific purpose of the improvement, its bearing upon the war situation, and what effect a delay of the work until 1919 or later would have. With the information thus assembled and classified, an efficient road construction program is assured. While it is impossible to make any definite statement regarding the transportation of road materials, the expectations are that the transportation situation will be improved and that the shipment of such materials for essential projects can be made.

Road construction and maintenance in the United States involve an annual expenditure of some \$300,000,000, and there is scarcely a section of the country that is not seriously affected by a marked disturbance in road work.

Highway Builders and Users Organize

At a meeting in Chicago last month, leading men interested in highway development and transportation by highway formed a national organization under the name Highway Industries Association. One hundred and fifty delegates were in attendance, including representatives of 22 national and state associations, 10 roads machinery manufacturers, 25 road material producers, 18 manufacturers of motor cars, trucks and parts, and representatives of 18 trade periodicals and daily newspapers.

The meeting adopted a constitution for the association and elected officers as follows: President, S. M. Williams, of the Garford Motor Truck Co., Lima, O.; first vice-president, A. R. Hirst, of Wisconsin State Highway Commission; second vice-president, Lion Gardiner, of Engineering News Record, New York; third vice-president, S. T. Henry, of the Allied Construction Corporation, New York.

Headquarters are to be established in Washington for the period of the war to facilitate carrying out the objects of the association, which are: "To assist in co-ordinating the highways with other transportation agencies of the country; to encourage development of highways that will advance the economic life of the nation; to stimulate their use in such a manner as to facilitate and cheapen the transportation of food, raw materials and finished products, and to co-operate with government agencies, both state and national, to the end that our highways may be of maximum service in the transportation system of the country."

Glendale, Ariz.—Walter A. Lyons has been appointed to take charge of the local branch of the Kissel-Kar Co. of Phoenix.



Calendar of Coming Events

February 9-16—Kansas City, Mo., Show.
February 11-16—Third Annual National Tractor Show, Kansas City, Mo.
February 11-16—St. Louis, Mo., Show.
February 16-26—Annual San Francisco Show, Geo. A. Wahlgreen, manager.
February 18-23—Des Moines, Ia., Show.
February 23-March 2—Omaha, Neb., Show.
Feb. 25-March 2—Salt Lake City, Utah, Show.
March 2-9—Boston, Mass., Show.
March 19-23—Vancouver, B. C., Show.
April 9-13—Stockton, Cal., Show.



Trucks on Railroad Tracks

Imperial Valley Genius Makes His Road a Paying Proposition by Equipping More-lands With Flanged Wheels

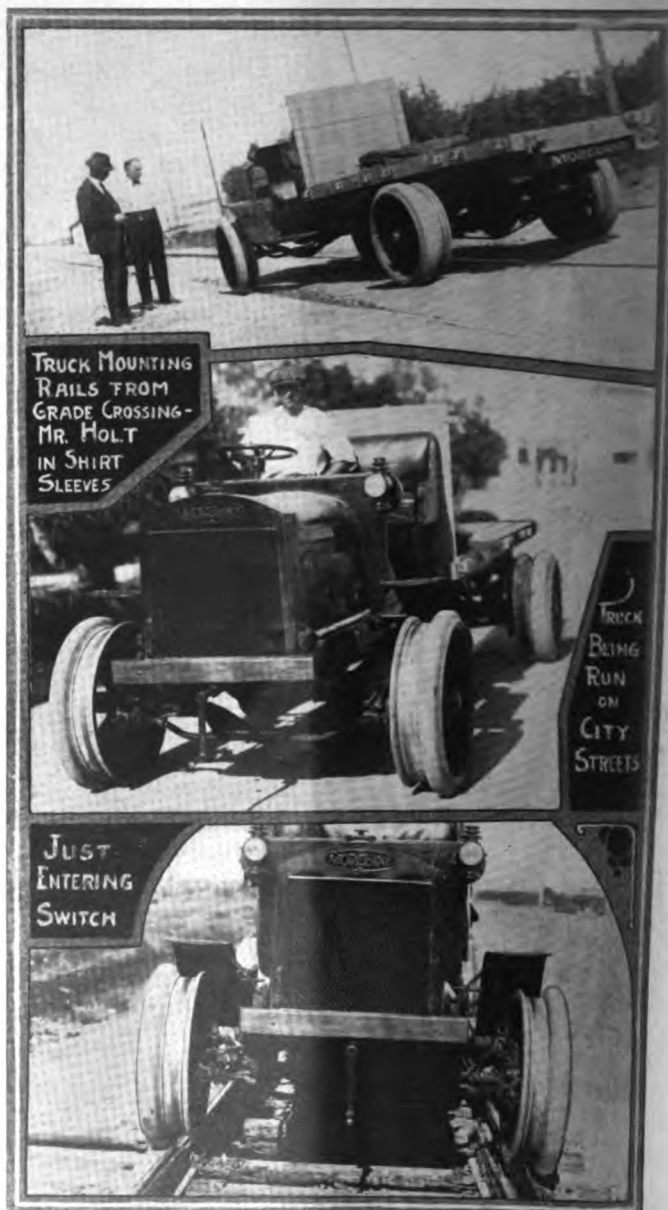
DOWN in the Imperial Valley in California, a section of the United States which has become world-famous through its agricultural products, the motor truck has come into its own to an extent probably surpassed nowhere else in the United States. The short haul between ranch and market, and the long haul between ranch and shipping point is now taken care of by motor truck freighters who, in the shipping season, are busy day and night. Many a record in load and haul transportation has been made by motor trucks in this extraordinary fertile valley, which lies below sea level.

Holtville and El Centro are prominent cities in the Imperial Valley, and are located about a dozen miles apart. Connecting them is the Holton Inter-Urban Railroad, which, like Holtville itself reflects the enterprise of W. F. Holt, prominent pioneer in the Imperial Valley. Five years ago the earnings of this road stood around \$17,000 a year. Then the automobile passenger bus and the motor truck appeared and the railroad's profits dwindled steadily until the road was suffering a loss of about \$5000 a year. At first the slump was only in passenger receipts, but later the motor truck became a very successful competitor in the carrying of freight.

Mr. Holt decided that it was the short-haul, small-bulk business that was being diverted into different channels, and that if the proper methods were installed he would bring the business back to his own road. He fully realized the value of the motor truck for haulage, and felt confident that its flexibility, which had hitherto worked to his disadvantage, could be turned to the betterment of his own interests.

He had a right-of-way through one of the most fertile sections of the Valley, where large crops were raised, and where it was almost as cheap to haul by motor truck to El Centro as it was to haul to Holtville and load at that point for El Centro. So it was up to the railroad to get shipments right at the ranches and business houses and deliver them to El Centro, without transfer, and to bring incoming freight from El Centro and Holtville to the ranchers and business houses without transfer. This the motor truck was already doing, using the highways entirely. Mr. Holt decided to use motor trucks, running them on his own railroad tracks and upon the highway as well. He has separate trucks for freight and passenger business.

He has patented a motor truck wheel, which has flanges on the inner side and a solid rubber truck tire on the outer side, the latter having a larger circumference than the inside metal portion. Mounted on these wheels are 2½-ton Moreland trucks, which use diesel as fuel. The freight truck gets its load at the different business establishments and then mounts the tracks at a street or road crossing and starts either for Holtville or El Centro. When freight is to be unloaded at any point midway the truck leaves the tracks at any dirt road crossing where the rail and road surface are nearly even with





The MACK Gets New Business

The 3½ ton MACK owned by the Pasadena Ice Company goes directly to the ranches in the vicinity of Pasadena, is loaded with a big cargo of oranges or other fruit, and brings it back to the Ice Company's cold storage plant.

The MACK has widened the scope of the Ice Company's operations. It brings in new business. The swift truck makes long hauls profitable.

This MACK is but one of 7,000 used by progressive corporations and individuals the world over. MACK trucks are used in all fields of industry to cut down waste and to improve service. Made in various sizes from 1 to 7½ tons capacity; with trailers, up to 15 tons capacity. Special bodies can be designed to meet specific needs.

Write for a record of MACK performances in your kind of business.

**INTERNATIONAL MOTOR COMPANY
NEW YORK**

Los Angeles, California, International Mack Truck Corp.
San Francisco, California, International Mack Truck Corp.

Seattle, Washington, T. G. Young
Portland, Oregon, T. C. Atwell

Performance Counts

Service MOTOR TRUCKS

FOR STRENGTH, CAPACITY, ECONOMY, POWER, SPEED AND BIG VALUE

Service Motor Trucks are built with the best of materials and the most modern methods of construction. They are built to last, to give you the most service and the most economy. They are built to give you the most power, the most speed, and the most value. They are built to give you the most service and the most economy. They are built to give you the most power, the most speed, and the most value.

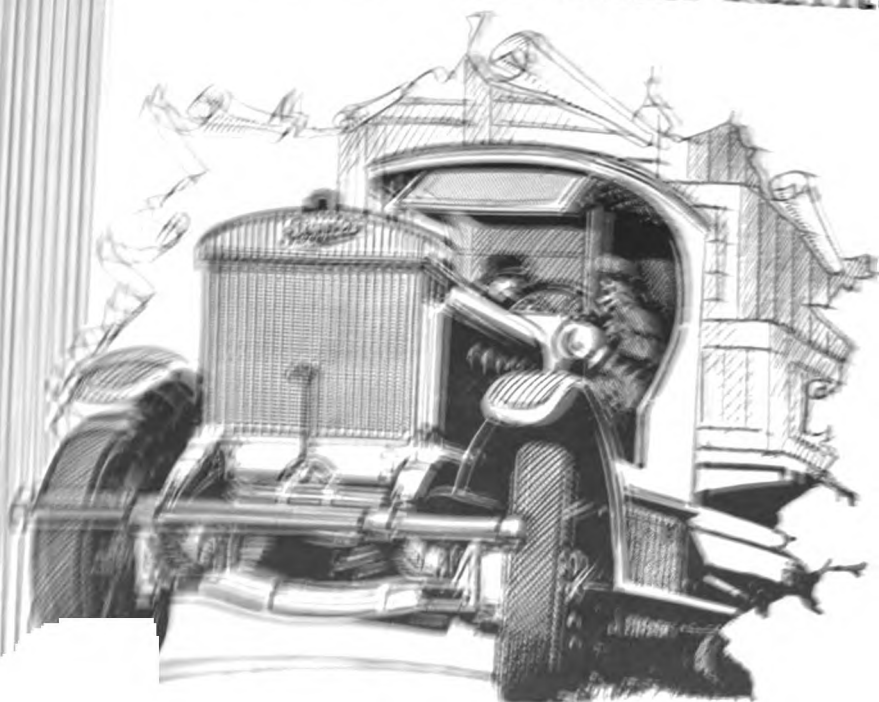
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Built By Specialists

Service Motor Trucks are built with the best of materials and the most modern methods of construction. They are built to last, to give you the most service and the most economy. They are built to give you the most power, the most speed, and the most value. They are built to give you the most service and the most economy. They are built to give you the most power, the most speed, and the most value.

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A Few Valuable Territories Still Open



Service Motor Trucks are built with the best of materials and the most modern methods of construction. They are built to last, to give you the most service and the most economy. They are built to give you the most power, the most speed, and the most value. They are built to give you the most service and the most economy. They are built to give you the most power, the most speed, and the most value.

Write Today for Catalog and Plans for the Big 1918 Drive

SERVICE MOTOR TRUCK CO.

Dept. A, Wabash, Ind.

Distributors in All Principal Cities

Mail to: Motor Truck Co., Dept. A, Wabash, Ind.

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GMC trucks are built in all practical sizes, $\frac{3}{4}$ -ton to 5-ton capacity — six sizes in all. Each size better suited than any the rest for a particular class of work.

Road Ability—

“Road-ability” sums up in a single word the character of GMC performance. Behind road-ability is that staunchness guaranteed by GMC overstrength and oversize at every point.

Every now and then an example of unusual GMC Road-ability comes to notice. Here is a case in point.

Although January 12, 1918 was the date of the worst blizzard and the coldest day in the history of the Detroit weather bureau—16 degrees below zero—with snow drifted yards deep, a GMC Truck kept the road all day.

This five ton truck hauled coal to keep an industrial plant from closing down, although the 60-mile blizzard demoralized street car service and prevented express companies and mercantile concerns from attempting delivery.

All day this GMC hauled coal from a snow-bound siding over a nine-mile route, six tons at a load, and made five round trips. For eighteen hours the following day it made eight round trips, hauling 48 tons, from seven in the morning until midnight.

No matter what your truck requirements, there is a GMC to meet your needs as this one met the needs of its owner. Through winter snow or spring mud GMC road-ability can be depended on. There are six practical sizes.

GENERAL MOTORS TRUCK COMPANY

One of the Units of the General Motors Corporation

PONTIAC, MICH.

New York Philadelphia Boston Chicago
St. Louis San Francisco

Distributors Most Everywhere

(311)

out the use of any mechanical device, takes the dirt road to the ranch or mercantile house, makes the delivery, returns to the railroad and again mounts the rails. The truck operates on a regular schedule and, except at some doubtful crossings, travels at a speed of about 40 miles an hour.

After the truck wheels are mounted on the rails they are locked rigidly by a special patented brace. Where the truck might miss the rails at some crossings, old steel rails are used as an extra guard rail, set just outside the regular rails and just far enough away so the rubber tire runs between the two rails freely and without scraping. The difficulty of crossing switches and frogs has been overcome by Mr. Holt with still another device.

From the volume of business now being done by these trucks it appears as if others will be installed. The railroad is very attentive to its passenger carrying business and this is showing an increase each month. The wear and tear on a motor truck is less in this kind of operation and the mileage per gallon of gasoline and quart of oil is much greater than that possible with trucks operated solely on dirt or paved roads.

The operation of the motor truck on the Holton road

has aroused much attention from railroad men. There is no reason why freight cannot be successfully handled between terminals in this way and it is possible to do considerable switching with a motor truck, replacing the noisy, fuel-eating switching engine.

Trucks at National Show Discussed

A separate motor truck show, held as an annex to the national shows for 1918, is receiving a certain amount of consideration from some of the leading truck manufacturers. All automobile shows, this year, it is held, must more than ever before, make their appeal as being utilitarian. Having scanned the situation from this angle of utility they are coming to recognize that the motor truck, which is designed primarily and solely for industrial uses, is entitled to share in the same national publicity which is afforded the passenger car division of the motor vehicle industry through the New York and Chicago shows.

Motor Truck a Godsend to Remote Oregon Hamlets

The Pacific Highway is being used to a tremendous extent where it passes through Washington and Oregon by motor trucks hauling freight on trips covering distances up to fifty or seventy-five miles. Each year sees an increasing number of motor vehicles engaged in this industry. Many small towns in the Pacific Northwest are still remote from the railroads and to them the motor truck has been a godsend.

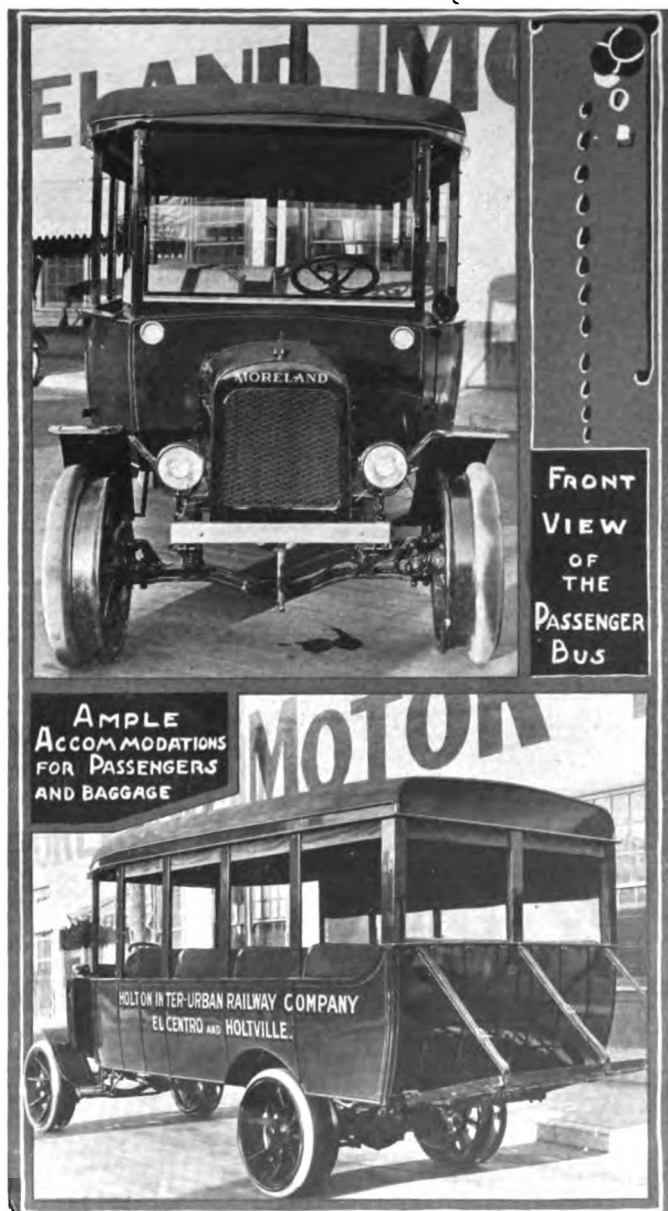
Motor Truck Superior for Less-than-Carload Shipments

Probably the greatest advantage in transporting freight by motor trucks in intercity and interstate haulage is the feature of unbroken bulk, says D. O. Skinner, advertising manager of the International Motor Co. As everyone knows, time and labor in trans-shipping less-than-carload freight are costly items in moving any product. Direct delivery from shipper to consumer is possible only by the use of motor trucks. The flexibility of the motor truck is such that it is not restricted to any fixed road. It takes the shortest cut between points and circumvents any obstruction, such as going around a blocked road, detouring to avoid a damaged bridge, or selecting the best highways.

There really is no comparison between the efficiency of motor haulage and railroad haulage on less-than-carload shipments. The railways simply cannot do the work efficiently and on time. The substitution of electric motor transportation overcomes all drawbacks imposed by the railroads. With the future development of highways, motor transportation between points at great distances will become an established fact.

In the present state of country highways, the motor truckman must have an unusual degree of courage to attempt driving between certain of our cities, but we have the advantage of knowing the definiteness of our destination and get there somehow even with the fearful handicap of our highways. If these grave difficulties of the road transportation are now being surmounted by the intrepid interstate trucker, and time and money is being saved, what will be the rewards when Congress awakens to the needs of practical military highways, and develops a chain of such highways between all of our principal cities and towns?

Sacramento, Cal.—The Kimball-Upson Co. has taken the distribution of Federal tires for the Northern California territory.



DENBY

MOTOR TRUCKS

PORTLAND

BOSTON

WORCESTER

G. B. KIMBALL,
PRESIDENT AND TREASURER
F. A. ORDWAY,
VICE PRESIDENT
A. W. MUTTY,
SECRETARY
C. G. ABBOTT,
MAINE MANAGER

THE HENLEY-KIMBALL CO.
DENBY MOTOR TRUCKS
652 BEACON STREET
BOSTON, MASS.

TELEPHONES
SALES DEPARTMENT
BACK BAY 5330
SERVICE DEPARTMENT
VASSAR STREET
CAMBRIDGE 6140

January 26, 1918

Mr. Garvin Denby,
President, Denby Motor Truck Company,
Detroit, Michigan.

Dear Mr. Denby:-

A mighty good suggestion!

That's what we call the letter of the Towar-Ayers Company, inviting dealers interested in Denby trucks to visit their Sales and Service station in Detroit, and exchange ideas.

When we were investigating the merits of the different trucks preparatory to entering the field, we availed ourselves of The Towar-Ayers invitation, and were extremely well rewarded for the time.

Now we want to extend a similar invitation to the entire Denby organization, present and prospective. For we believe that The Towar-Ayers Company has started something that will result in a wonderful all-around gain in efficiency; and we want both to contribute our share toward it and to get our share of the benefit.

At all times, and particularly during the Boston Show, we shall be very glad to have visiting dealers make our showrooms their headquarters. We know that the exchange of ideas and experiences will be mutually helpful.

Yours very truly,

THE HENLEY-KIMBALL CO.,

F. A. Ordway
Vice-President.

*J.C.A.
Glad to see that
the man on the
firing line realize they
are an integral part
of the organization.
Please use this
letter in our next
advertisement to
dealers. J.C.A.*

Pioneers of the Internal Gear Drive —
Denby Motor Trucks are made in 1 to 5 tons capacities

DENBY MOTOR TRUCK COMPANY
DETROIT
MICHIGAN

U.S. Trucks



Come In-Now! Sell the Coming Truck

You know what progress U. S. Trucks made during the past year.

You know how its dealers—even the new ones in the new territories—cleaned up.

The coming year will see **MORE** and **FASTER** progress.

Business everywhere is going to flow in bigger volume. The usual means of transportation are to be more congested.

Truck service is to be absolutely necessary.

Get in now and be ready to handle your share of this business. Sell the "coming" heavy duty truck—the one that is coming fastest.

Big capital, a high grade, thoroughly co-operative organization, the biggest factory in the country devoted to heavy duty trucks—all these are behind the U. S. line.

Come in now! Come in and win! —

Worm Drive, 2½, 3½ and 5 ton.
Chain Drive, 2½ and 3½ ton.

The United States Motor Truck Co. C I N C I N N A T I



REPUBLIC SPECIAL

Chassis
\$995



If you have work for a Republic Special you pay for it whether you buy it or not—Hauling Wisdom.

Seven Models ¾-ton to 5 ton at Low Prices

Republic Special ¾-ton, \$995; Republic Dispatch for delivery purposes, \$895; 1-ton with bow top and stake or express body, \$1295; 1½-ton chassis, \$1650; 2-ton chassis, \$1975; 3½-ton Dreadnaught chassis, \$2950; 5-ton Thoroughbred chassis, \$4500. All prices f.o.b. factory. We furnish every type of body including hoist, gravity and elevating dump. Write for book on any model in which you are interested.

Republic Special is Making Immense Business for Dealers

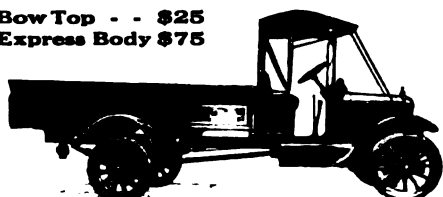
Republic Special ¾-ton Internal Gear Drive Truck at \$995 is speeding up the truck market in more than 1100 Republic Distributing Centers. It meets the need of the **biggest** market with a big, roomy, powerful, speedy truck at a low price that puts every makeshift out of the running.

Here is a Republic Truck—every inch of it, from the ground up—with powerful Republic Motor, Republic-Torbensen In-

ternal Gear Drive, Armored Radiator—every feature original truck construction—¾-ton, with Republic capacity for excess strain. It has a wheelbase of 128 ins., taking express or stake body with *lots* of room.

Six other Republic Internal Gear Drive Models up to and including 5-ton, give the Republic Dealer control of his market with all capacities for every purpose. Write for our liberal proposition.

Bow Top - - \$25
Express Body \$75

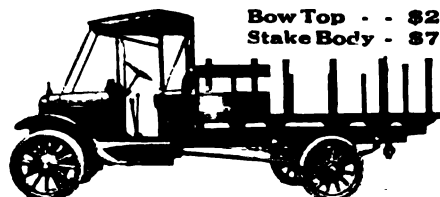


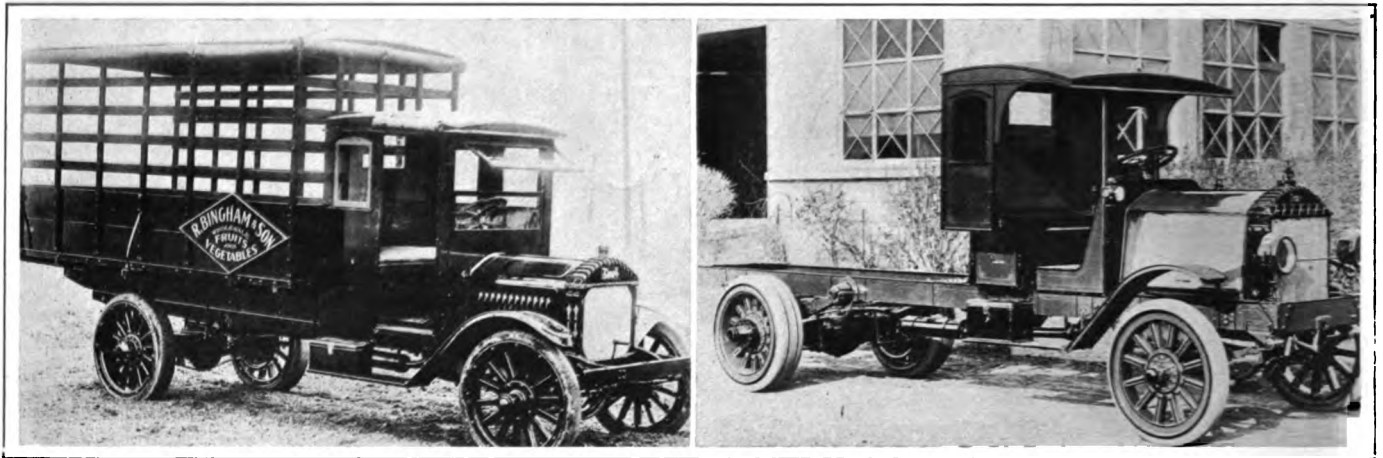
Address Department AL

Republic Motor Truck Company, Inc.
Alma, Michigan

See Your Nearest Republic Dealer
Dealers and Service Stations in Over 1100
Distributing Centers

Bow Top - - \$25
Stake Body - \$75





TWO MODELS OF DART TRUCK—CC4, 2-TON, LISTED AT \$2,470, AND L, 3 1/2-TON, AT \$3,400.

Three Models of Dart Trucks

All Show Results of Experience Gained In Army Work—Two-Ton Job is Specially Noteworthy

THE Dart Motor Truck Co., Waterloo, Iowa, will produce for the present year three models rated by the makers in capacity of 2,000, 4,000 and 7,000 pounds, respectively, all following the same general chassis lines. The trucks show the results of experience gained in service with the United States army. Engineer W. H. Johnson is a member of the Government Advisory Board, and the 2-ton model especially shows some of the requirements to conform with government specifications. All three models have Buda engines, dry plate clutches, final Timken worm drive, chrome vanadium springs, and Hotchkiss drive. For the purpose of detailed description Model "CC4," the 2-ton job, is selected as representative of the line. Variations in design are noted where there is material difference. The rated capacity of the "CC4" is 4,000 pounds; body allowance, 1,200 pounds, making a total weight on the chassis, including body and pay load, of 5,200 pounds. The engine is four-cylinder, cast en bloc.

The oiling system is of the positive pressure type. The oil is forced through a pipe to the main bearings and from these through passages in the crankshaft to the connecting rod bearings. Pistons, cylinders and cams are lubricated by oil thrown from the lower end of the connecting rod. Oil pump and strainer are removable from the crankcase without disturbing other parts.

The bore is $4\frac{1}{4} \times 5\frac{1}{2}$ stroke and will develop 40 horsepower at 1,200 revolutions. The axles are all Timken Detroit and are all equipped with Timken taper roller bearings, the front axles of both the larger sizes having roller bearings in the steering knuckle. The rear axles are the newest type, one-piece housing, eliminating any possible oil leaks.

The brakes are duplex internal expanding, and larger than any previous models of the same type. The radiators are of cast tank type, the top and bottom tanks being timed to assist in cooling. The core is honeycomb construction with large cooling surface. On the $3\frac{1}{2}$ -ton model the core is so constructed that it is divided into

seven separate sections, each having its one opening in the top and bottom tank; each section is held in place by bolts cast integral with the tank and plugs holding sections rigidly in place; but allowing the removal of a section in case of injury. Gaskets and plugs are furnished and carried in the tool box so that any section may be removed and repaired without laying up the truck.

The water circulation in the two larger models is by centrifugal pumps; in the 1-ton model the thermosiphon system is used. Master carburetors are used in all models and are fed by gravity from tanks under the seats, except the 1-ton, where the Stewart vacuum system is used.

High tension magnetos are used on all models, and electric starter and lighting system are optional at an extra cost. All models employ dry plate clutches, which transfer the power through the transmission to the Timken Detroit worm-drive rear axle. In the 1-ton and 2-ton models the transmission is mounted in unit with the motor; in the $3\frac{1}{2}$ -ton model it is mounted amidships with the larger propeller shaft between the transmission and the rear drive. In the 2- and $3\frac{1}{2}$ -ton models transmission is four speeds with $1\frac{1}{4}$ -inch gear face, giving an exceptionally low gear reduction on the low speed and direct on high. Both torque and propulsion are taken on the Hotchkiss plan through the rear springs; these springs are of chrome vanadium steel and have three-point suspension at the driving end, so that in case of an accident causing breakage of top leaf the spring is supported by the second leaf and the truck can be operated without danger until the repairs are made. Left side steer and center control are employed on all models.

Wheels are artillery type, but steel wheels are optional at slightly extra cost on the 2- and $3\frac{1}{2}$ -ton models. The latter model is offered in several wheelbase lengths. Large size single tires are standard equipment on all models. 7-inch being used on the 2-ton and 10-inch on the $3\frac{1}{2}$ -ton. Dual tires are optional.

The prices of the Dart models are: "E." 1-ton, \$1,850; "CC4," 2-ton, \$2,470; "L," $3\frac{1}{2}$ -ton, \$3,400.

Santa Barbara, Cal.—F. W. Caldwell has been appointed manager of the sales of Packard, Reo, Woods Dual, Mercer and Jordan cars handled here by Franklin Ritchie.

Modesto, Cal.—L. B. Service and J. M. Moyle have formed a partnership and will handle Fageol trucks and tractors for Modesto county.



HOW VEEDOL NATIONAL ADVERTISING WILL INCREASE YOUR PROFITS

1918 campaign greater than ever before, bringing the Veedol message to more than 28,000,000 people

THE subject of lubrication has always been a mystery to the average motorist. Until the now famous Sediment Test was given widespread publicity, he knew of no way of choosing between one motor oil and another, except on a basis of price.

Veedol advertising is educating millions of motorists on the importance of choosing the right lubricant for their automobiles—a motor oil that will not break down and form sediment under the intense heat of the engine.

Veedol national advertising reached 28,000,000 people in 1917 and sales of Veedol doubled.

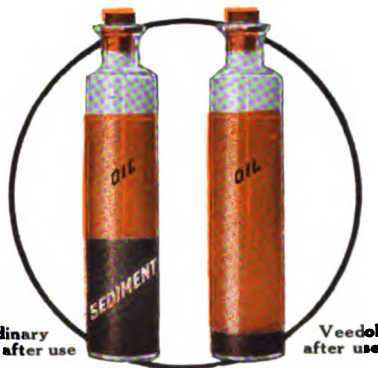
In 1918 Veedol advertising will reach even more people, with greater space, appearing oftener.

Today there are over a million Veedol users.

Veedol dealers shared in \$2,000,000 profits last year

When you stock Veedol all you have

to do is to use the signs and other sales helps we supply free of charge to cash in your share of Veedol profits.



Showing Sediment Formed After 500 Miles of Running.

VEEDOL

Profits to the dealer on Veedol are liberal, sales are sure and Veedol sales-building co-operation is cordial and effective.

Other Fast Sellers.

Veedol greases will profitably supplement your oil sales. There is a Veedol grease for every purpose and each is of the same high quality as Veedol.

Write for the money-making Veedol proposition today.

TIDE WATER OIL COMPANY
Veedol Department

Successors to
Platt & Washburn Refining Co.,
Bowling Green Building, New York.

Branches: Boston, Philadelphia, Chicago, San Francisco.

WRITE TO ONE OF THESE VEEDOL JOBBERS TODAY FOR SALES PROPOSITION

ARIZONA.

BABBITT BROTHERS Flagstaff
SMITH, HUGHES & CO. Phoenix
RICHARDSON SUPPLY CO. Tucson

CALIFORNIA

EVINS RUBBER & SUPPLY CO. Fresno
McCOY MOTOR & SUPPLY CO. Los Angeles

BERG AUTO SUPPLY CO. Oakland

JAS. S. REMICK CO. Sacramento

GAVIN WILLIAMS CO. San Diego

LATHAN AUTO SUPPLY CO. San Francisco

McCOY MOTOR SUPPLY CO. San Francisco

TIDE WATER OIL CO. San Francisco

NORMANDIN CAMPEN CO. San Jose

JAS. S. REMICK CO. Stockton

IDAHO.
SALT LAKE HARDWARE CO. Pocatello

NEVADA
NEVADA AUTO SUPPLY CO. Reno

OREGON.

BALLOU & WRIGHT Portland
MILLER & PARKER CO. Oregon City

UTAH.

SALT LAKE HARDWARE CO. Salt Lake City

WASHINGTON.

BALLOU & WRIGHT Seattle
AUTOMOBILE SUPPLY CO.

Mention "Motor West," Please, When Writing to the Advertiser

Farmer Says Truck Will Make Rural Sidings Unnecessary

"A farmer without a motor truck is simply making a fatal mistake," declares H. E. Cushing, of Modesto, Cal., who uses a Maxwell one-ton truck on his California ranch. "From an economical standpoint the truck upkeep is trifling, compared to feeding the amount of stock and maintaining equipment necessary to duplicate it in actual service and general farm-work. I am provoked at myself now for having delayed in recognizing the value of the motor truck when that farm vehicle was in its infancy."

Mr. Cowell believes the day is not far distant when all short hauls will be by motor truck. He predicts that rural side-tracks will practically be abandoned in the near future and that motor trucks will haul the farm products to more central points for immediate shipment to their destination. "Such a system," says he, "will solve the transportation problem almost overnight, for it will release thousands of cars in every division for transcontinental hauls. Where good roads exist the motor trucks can be operated at a minimum cost. The wonder is that farmers, most of whom are shrewd, calculating men, have not grasped the truck idea long ago."

Freight Congestion a Boon to Motor Truck Industry

Benefits innumerable will accrue to the motor truck industry from the driving of thousands upon thousands of trucks through the country during the freight congestion. The demonstrations thus made of the reliability of the trucks and of their usefulness in all weather, will have an effect upon the public mind which no amount of advertising and of publicity could have given. William Fulton Melhuish, president of the Fulton Motor Truck Co., of Farmingdale, Long Island, looks upon the effects of the movement for delivery to all sections by road as the most important development of the times, and believes that business men are certain to be impressed by the all-around reliability of motor trucks for business. The trucks traveling through the country are going to show the futility of much of the present road-building methods, and this will bring about government building of roads to stand the strain of heavy truck work. That will inaugurate systems of national highways and bring about general truck delivery after the war has closed as a means to economy.

McGraw Tire Official's Optimistic View of Conditions

Leaders of the automobile industry have done much to correct extravagant rumors regarding the curtailment of the motor industry. Conditions are defining themselves more favorably, we feel, said John Morgan, vice-president of The McGraw Tire & Rubber Co. The effect of these rumors has been confusing to dealers and has caused them to limit their buying of cars and accessories. Unfortunately, few of them have known the real facts or had a correct point of view. These we believe they should have, based on the present outlook for 1918.

The motor car industry is a fundamental in modern business life and has come to stay regardless of peace or war conditions. The automobile is essential to the welfare of American business. Approximately 85 per cent of the output is purchased every year for business purposes and is as indispensable as the telephone, electric light and the telegraph. The so-called pleasure car is more or less a negligible factor. The great bulk of passenger cars are being used by business men, farmers and professional men in the more expeditious handling of their business.

If there is any curtailment in the automobile output during the coming year, it will not be due to lack of demand; in all likelihood more cars will be wanted than can be produced and the outlook for production looks better every day.

Automobile manufacturers are being assured by the steel makers of an ample supply of high grade steel, which will not interfere with the needs of other industries. Only 5 per cent of the total steel production is consumed in

making motor cars. Coal during the past few weeks has been a serious menace, and the difficulty persists but it is improving and little trouble is anticipated by manufacturers in securing sufficient fuel. The most serious problem is transportation, which is admittedly bad, but it is believed it will greatly clear up under government supervision and pooling of railroad facilities. There should be no ground for pessimism on this score.

An encouraging element in the situation is the attitude of the government towards the motor industry as a whole. A recent investigation into its economic value during war time has resulted in a conviction that it is vital to the commercial health of the nation. The investigating committee ranked it third in importance among the war industries. It was placed next to the shipbuilding trade.

In this investigation the effects in Great Britain of suppressing the passenger car business were taken into account. The industry was totally wrecked by adverse action of the government early in the war and now it is sought to remedy by legislation what is recognized to be one of the most serious financial mistakes of the war. It will be years before the British automobile industry gets on its feet again.

Taking all these factors into account, it would therefore seem that at least in the accessory business dealers ought to stock up for a full normal business. If there are fewer passenger cars made those already in commission will be used all the harder to do transportation work required. At the end of 1917 there were about 4,500,000 passenger cars in service and if to these only 1,000,000 new cars are added, the total will reach nearly 6,000,000, requiring a tremendous volume of accessories. Figuring five tires to the car, there will be needed over 30 million tires for the year 1918. Certainly the outlook for automobile accessory sales is encouraging to say the least.

Santa Barbara, Cal.—The El Camino Real Motor Car Co., Pierce-Arrow, Chalmers, Oakland and Maxwell distributor, will make additions to its garage space, increasing it to 70,000 square feet.



HOW PASADENA KEEPS ITS ROADS IN CONDITION.

"Millionaires' grad," as Pasadena is nicknamed, is exceedingly jealous of its beautiful streets and roads, and the best is none too good for them. Here is shown one of the Federal trucks which the municipality keeps constantly employed in ironing out the wrinkles in the road surfaces. The Federal is shown with its tar boiler on the trailer, and this outfit has saved the city fathers thousands of dollars a year.



STA-TITE Piston Rings

Play an Important Part in the Success of America's Leading Automobiles, Motor Trucks and Tractors.

Every automobile engineer will tell you that the Life, Power, Speed, Hill Climbing Ability and Operating Cost of a gasoline driven vehicle depends on its motor.

The strength and power of any motor depends largely on its compression. Perfect Compression means an efficient, clean, smooth running motor.

A motor without Perfect Compression is troubled with improper lubrication, lack of power, and an accumulation of carbon.

STA-TITE RINGS give Perfect Compression and overcome these troubles—besides saving on oil, gasoline and repair bills.

STA-TITE RINGS insure proper lubrication and prevent pistons from wearing dry and scoring cylinder.

STA-TITE RINGS are guaranteed to be leak proof.

Dealers You should sell STA-TITE RINGS. The three piece construction, as shown in illustration above, assures equal distribution of pressure on cylinder walls.

Remember—STA-TITE RINGS are manufactured by the *largest manufacturers of piston rings in the world.*

Send NOW—TO-DAY for "TWELVE REASONS" why STA-TITE RINGS will prove to be business builders.

THE *Piston* RING COMPANY
SPECIALISTS IN PISTON RINGS

104 Sanford St.

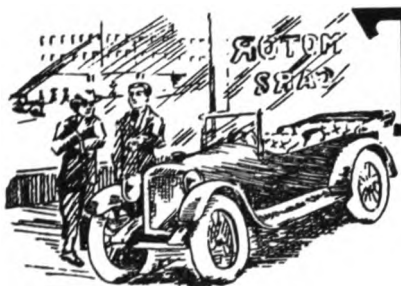
Muskegon, Mich.

Makers Also of "Quality" Snap Rings

*** STA-TITE ***
PISTON * RINGS

Mention "Motor West," Please, When Writing to the Advertiser

Digitized by Google



Trade Briefs and Factory Gossip



Goodrich Nets \$12,675,000.

Net earnings of the B. F. Goodrich Rubber Co., of Akron, O., during the year 1917 were the greatest in the company's history, according to a statement issued after the recent annual meeting. They reached \$12,675,000, which was more than \$3,000,000 greater than the 1916 earnings. The figures do not include income and excess profits taxes, which may approximate \$2,250,000, leaving a net profit of \$10,245,000. This is surpassed by the 1915 net of \$12,200,000, but there was none of the war taxation features that hedge the earnings of companies in these days. Two preferred dividends and one common dividend have been declared at the usual rates. The net earnings added to the previous surplus makes a total of \$20,000,000 in undivided profits.

* * *

Packard Will Raise Prices.

The Packard Motor Car Co., Detroit, will increase the prices on all its models March 1. The advance on the 3-35 models is \$200 and that on the 3-25 models, \$250. The price change is on the chassis only, all body styles being advanced the same amount. On account of present railroad conditions, the Packard factory will use the drive-away methods to send as many cars as possible to its dealers.

* * *

Little Giant Truck Co. Formed.

The Little Giant truck, manufactured by the Chicago Pneumatic Tool Co., will be distributed through a sales organization appointed by the newly formed Little Giant Truck Co. The officers of this new company are those of the Chicago Pneumatic Tool Co.

* * *

Big Increase in Mason Sales.

Sales of the Mason Tire & Rubber Co. for the first quarter of the 1918 fiscal year show an increase of 700 per cent over the same quarter of 1917. January sales were the largest in the history of the company for any one month.

* * *

MacConnell on Hyatt Sales Staff.

B. G. Koether, manager of the Hyatt Roller Bearing Co., Detroit, announces the recent addition to their staff of sales engineers, of C. E. MacConnell, formerly with the Detroit branch of the Goodrich Rubber Co. Mr. MacConnell started life as a cowpuncher in the southwest, from which after four years, he went with the Santa Fe Railroad, and later with the Pierce Oil Corporation.

Acme Truck Capital, \$1,000,000.

The Acme Motor Truck Co., Cadillac, Mich., formerly known as the Cadillac Auto Truck Co., manufacturers of the Acme truck, has increased its capital stock to \$1,000,000. A very substantial dividend on the old capitalization was recently declared, which is indicative of the company's growth in 1917. Acme production for 1918 is to be double that of 1917. Substantial additions to its present well-designed plant are contemplated in the early spring. The Acme line consists of 1-, 2-, 3½- and 4-ton worm-drive trucks. The company also specializes in body building in its own plants.



CAPT. SHIRLEY BAKER.

General Manager Gruss Air Spring Co., San Francisco, now doing his bit "Some-where in France."

General Tire to Broaden Line.

The General Tire & Rubber Co. has appointed H. G. Ault to take charge of the work of re-organizing its tire accessories and repair materials department. The re-organization will make it possible for the company to expand its line by the addition of several new articles. Ault was previously connected with the Firestone Tire & Rubber Co., of Akron, O., where he was engaged in a similar capacity.

* * *

Mercer Designer Now With Stanley.

E. H. Delling, designer of the Mercer car, has joined the engineering department of the Stanley Motor Carriage Co., Newton, Mass., as design engineer.

Flint to Aid Melhuish, in Fulton.

H. J. Flint has been appointed assistant sales manager for the Fulton Motor Truck Co., of Farmingdale, L. I. Active charge of the sales department will be retained by W. F. Melhuish, president and sales manager of the company, but will be ably assisted by Flint in the former capacity. The new assistant sales manager was formerly connected with the Olds Motor Works as assistant sales manager, later becoming eastern sales manager for the Smith Form-A-Truck Co., and lately was sales manager for the Wilson Truck Co. Walter Bamford, also formerly connected with the Olds company, has been appointed production manager for the Fulton company.

* * *

Dart Truck Prices Increased.

The Dart Motor Truck Co., Waterloo, Iowa, has increased the price of its 2-ton and 3½-ton models, effective February 1st, as follows: The price for the 1-ton model remains the same as formerly, \$1,850. The price of Model "CC4," 2-ton, has been raised from \$2,470 to \$2,650, and Model "L," 3½-ton, from \$3,400 to \$3,600.

* * *

Flechter Carburetor Expanding.

L. V. Flechter & Co., well-known New York carburetor manufacturers, have opened a factory branch in Detroit at 790 Woodward Avenue. George K. Parsons has been appointed manager in charge of all factory sales. Frank M. Eldredge, the widely-known advertising manager who conducts an advertising bureau in Detroit, has been engaged to handle all advertising. The Flechter carburetor has been known to the trade since 1910, being manufactured in the mammoth plant of the Neptune Meter Co. of Long Island City, N. Y. The company manufactures a special model carburetor for Fords, known as the "Trident." In addition, other models are made for all cars.

* * *

Burke with American Ever Ready.

W. W. Burke, formerly Eastern sales manager for Gray & Davis, Inc., has been appointed sales manager of the Electrical Starter Division of the American Ever Ready Works, Long Island City, and will have charge of the marketing of their new starting and lighting system for Ford cars. Mr. Burke was one of the pioneers in the sale of starting devices and is well-known to the automobile accessory distributors of the entire country.

DRIDEK—With the Leather Finish



DRIDEK with its leather finish, is an entirely new creation, based on many years' experience in furnishing tops and upholstery for the majority of the cars that have been put on the market.

DRIDEK looks as well as the best of leather. The distinguishing features in the wear of DrideK are: that you cannot scratch the finish; that it retains its color until entirely worn out; and that it is absolutely waterproof.

The product is unquestionably superior, and the price is within the reach of your specifications. Made in black and many attractive colors.

Send for samples and price list.

L. J. MUTTY COMPANY
BOSTON, MASS.

SCOVEL IRON STORE COMPANY, *Pacific Coast Agents*
SAN FRANCISCO and LOS ANGELES, CAL.

Penna. Rubber Plant Improvements.

The Pennsylvania Rubber Co., Jeannette, Pa., is continuing the steady rate of improvements upon its factory, which will soon be operating efficiently to a point never reached before. The shipping department has been enlarged to conform with the steadily rising output of Pennsylvania tires and tubes. Greater efficiency and security has also been furthered by the erection of an iron fence which encloses the factory and takes in the 29 acres adjacent to the factory.

* * *

New King Prices Announced.

The prices for the eight-cylinder King product have been announced by General Sales Manager Wallace C. Hood as follows: Seven-passenger touring car or three-passenger roadster, \$2150; four-passenger Foursome, \$2350, and seven-passenger convertible Sedan, \$2950. Wire wheels are extra on all cars except the Foursome. In addition to wire wheels being standard on the Foursome, the car will also come equipped with 32x4 1/2-inch cord tires.

* * *

Landis Heads Elkhart Sales.

I. D. Landis has been appointed sales manager of the Elkhart Carriage & Motor Car Co. He was formerly advertising manager and director of sales correspondence for the Crow-Elkhart Motor Co.

Rubber Heads Form War Committee.

The Rubber Association of America has appointed a war service committee which will co-operate with the Government by representing the rubber industry to the Government on one hand and the Government to the rubber industry on the other. The committee consists of B. G. Work, president of the B. F. Goodrich Rubber Co.; James Newton Gunn, president of the United States Tire Co.; G. B. Hodgman, president of the Hodgman Rubber Co.; and P. W. Littlefield, vice-president of the Good-year Tire & Rubber Co.

* * *

Paige Profits Over \$1,000,000.

The Paige-Detroit Motor Car Co., of Detroit, made net earnings of more than \$1,000,000 during the last fiscal year, according to the recent report of President H. M. Jewett, at the annual stockholders' meeting. Officers holding executive capacities during the last fiscal year were re-elected and the fiscal period was changed to end on Dec. 31.

* * *

Stewart-Warner Quarterly Dividend.

The Stewart-Warner Speedometer Corp., of Chicago, has declared the usual quarterly dividend at a meeting of the directors. The dividend is at a rate of 1 1/2 per cent and is payable Feb. 15 to stockholders of record Jan. 30.

Fisk Sales Increase 40 Per Cent.

Gross sales of the Fisk Rubber Co., Chicopee Falls, Mass., during 1917 were 40 per cent greater than those for the previous year. Exact figures on the company's business are not yet known; the per cent increase in sales would indicate that the company's business during the year amounted to more than \$28,000,000. Only three years ago Fisk business did not quite reach \$11,000,000 annually.

* * *

Mason to Make 1500 Tires Daily.

A large force of men is at present at work installing the new calendars and mills of the Mason Tire & Rubber Co., Kent, O., which, when erected and in operation, will give the Mason plant a daily production of 1500 tires. Other necessary machinery is arriving steadily and is being installed as fast as it reaches the factory. Freight embargoes and other causes of traffic delay have held back somewhat the receipt and erection of the new machinery.

* * *

Lucius French a First Lieutenant.

Lucius French, advertising manager of the National Motor Car and Vehicle Corporation, Indianapolis, has become a first lieutenant in the Motor Section of the Ordnance Department. Mr. French for the past four years has, in addition to his advertising work, been assisting President George M. Dickson.



SALES ORGANIZATION OF MCGRAW TIRE & RUBBER CO. BANQUETS AT THE FORT PITTS HOTEL, PITTSBURGH

This banquet was held in connection with the company's annual sales meeting and was held in the new McGraw plant at the East Pitt Hotel, Pittsburgh. It was attended by the sales representatives from all over the country. The feature of the banquet was the presentation of the McGraw Tire & Rubber Co. award for the best sales representative in the country. The award was presented to the representative of the McGraw Tire & Rubber Co. who had the highest sales volume for the year. The award was presented by the company's president, Mr. J. M. McGraw. The banquet was a great success and the sales representatives were very pleased with the results of the year. The McGraw Tire & Rubber Co. is a leading manufacturer of tires and rubber products and is known throughout the world for its quality and reliability. The company's sales organization is one of the best in the industry and is responsible for the company's success. The banquet was a great opportunity for the sales representatives to meet with the company's management and to discuss the company's plans for the future. The McGraw Tire & Rubber Co. is a company that is always looking for ways to improve its products and its sales organization. The banquet was a great success and the sales representatives were very pleased with the results of the year. The McGraw Tire & Rubber Co. is a company that is always looking for ways to improve its products and its sales organization. The banquet was a great opportunity for the sales representatives to meet with the company's management and to discuss the company's plans for the future. The McGraw Tire & Rubber Co. is a company that is always looking for ways to improve its products and its sales organization.



Rear View of Williams Spotlight

...THE...

Williams Spotlight

Model A, 6-inch Reflector - \$9.00

Model B, 7-inch Reflector - 10.00

Both models have regulating device integral with bracket which limits the vertical movement of the lamp, thus complying with the lighting laws.

Detachable for Trouble Lamp or for lighting camp at night. The lamp handle contains the "off" and "on" dust-proof and water-proof switch which is conveniently located at the rear of the lamp.

We sell through jobbers only, and are represented on the Pacific Slope by

HUGHSON & MERTON, Inc.

SAN FRANCISCO

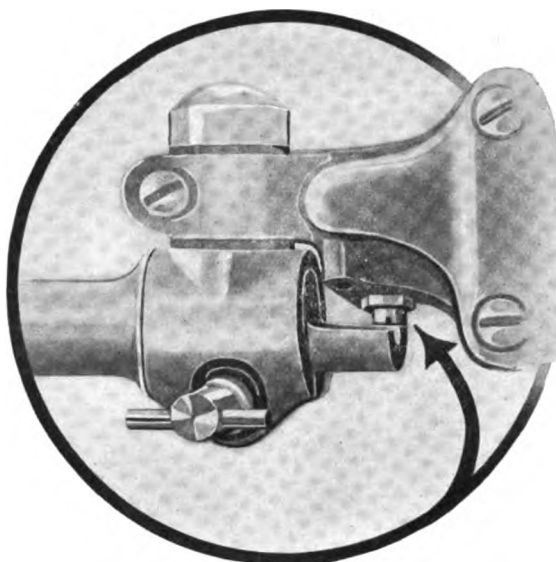
BRANCHES IN LOS ANGELES AND PORTLAND

MANUFACTURED BY

WILLIAMS MFG. CO.

310 North Flower Street

SANTA ANA, CAL.



Detail of Adjustable Control Feature of Williams Spotlight

Hooverizing the Motor Car

It being essential that we should all economize in every way possible, why not permit us to demonstrate to you the

GRÜSS AIR SPRING

which if installed on your motor car will enable you to realize wonderful saving in the expense of operation.

No rocking or swaying on curves. The only "two-way" action air spring in existence.

Cushion of Compressed Air above absorbs all shock.

Vacuum below absorbing all recoil.

The GRÜSS is the most efficient. Practically no attention required, making the GRÜSS the least expensive AIR SPRING to be had. **GUARANTEED 5 YEARS**

HOOVERIZE BY SAVING TIRES, MOTOR BEARINGS AND ENTIRE EQUIPMENT.

THE GRÜSS AIR SHOCK ABSORBER

Made in California

MAIN OFFICE AND INSTALLING PLANT

PNEUMATIC CUSHION COMPANY

179 Grove Street

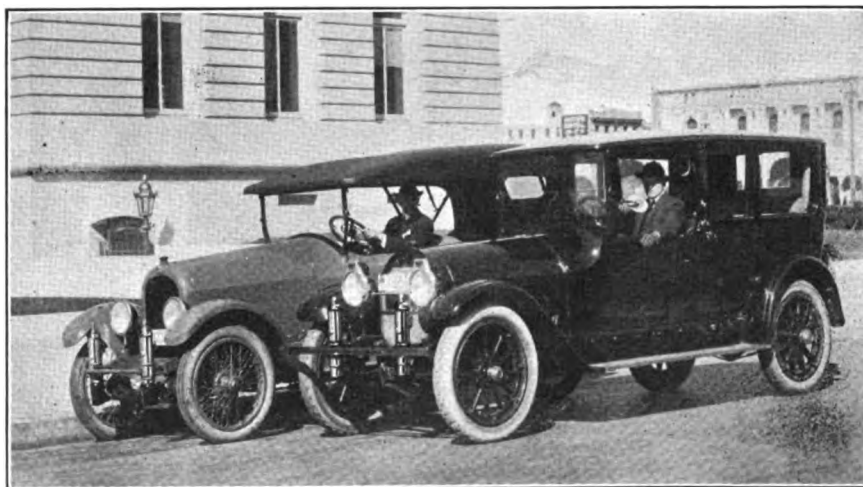
San Francisco, Cal.

Phone Park 4548

Los Angeles Branch

MESSRS. CARTER & VANBERG

775 Towne Avenue





INDIANA TRUCK CORPORATION BUILDS FACTORY IN RECORD TIME.

Here is a photograph of the factory built by the Indiana Truck Corporation at Marion, Ind., in which to produce several million dollars' worth of trucks ordered by the Government. It was two weeks to a day after the awarding of the contracts when this photograph was taken. This building, which contains nearly 50,000 square feet of floor space, is an example of the efficiency that the automobile industry is putting behind its Government work, and this factory is said to have been built more quickly than any factory in the state of Indiana. Foundations were laid in the dead of winter. Work commenced on the Government order before the carpenters were out of the building, and this is said to establish a record for quick entrance into construction of Government products.

Chalmers Reduces Number of Shares.

The Chalmers Motor Co. will reduce its capital stock from 532,000 to 400,000 shares, resulting from the recent decision arrived at by stockholders at the company's annual meeting. The reduction in number of shares will not change in any way the present outstanding shares, which amount to 132,000 shares held in the treasury and never issued. Directors were also elected, as follows: J. S. Bache, J. Horace Harding, Hugh Chalmers, George C. Van Tuyle, Jr., Henry E. Butler, Joseph H. Clark and W. P. Kiser.

* * *

Marshall Vice-President Jones Co.

Deering J. Marshall, oil operator, who has made in the past few months a fortune reputed to be close to the two-million dollar mark, has been elected vice-president of the Jones Motor Car Co., Wichita, Kan., manufacturers of the Jones line of passenger cars and trucks. Mr. Marshall bought quite a large interest in the Wichita company and was elected a director at the last stockholders' meeting. John Engstrom, a local lumberman and capitalist, is also a new director of the Jones Co., being selected to fill the chair recently vacated by J. W. Farmer, Pratt, Kansas.

* * *

Air-O-Flex Official Re-Elected.

At the annual meeting of stockholders of the Air-O-Flex Automobile Corporation, of Detroit, last month all the old officers were re-elected, including G. M. Walker, Jr., president; O. C. Kreis, vice-president and chief engineer; Charles D. Lehmkuhl, secretary; Robert A. Weinhardt, treasurer and consulting engineer, and A. B. Hanson, general manager.

* * *

Allen Co. Promotes Wagner.

Clarence W. Wagner has been promoted to the position of assistant advertising manager of the Allen Motor Co., Fostoria, O. He has been connected with the advertising department of the company for the past year.

Champion to Make Speedometer.

The Champion Ignition Co., Flint, Mich., will manufacture a new magnetic type of speedometer, to be known as the A. C.-Baldwin. The new device has been under extensive tests for more than two years. It was developed by Russell Baldwin, formerly connected with the Stewart-Warner Speedometer Corp. The name A. C.-Baldwin is made up of the initials of Albert Champion, head of the Champion Ignition Co., and the inventor's name. It will be manufactured at the company's spark plug factory, but new buildings will be erected to meet the expanded activities.

* * *

Henry Heads Dart Truck.

C. W. Hellen, president and general manager of the Dart Motor Truck Co., Waterloo, Ia., has relinquished his interests in the company to H. H. Henry, who has succeeded him as president of the company. The new president was formerly connected with the Maxfer Truck Co.

Columbus Varnish Increases Capital.

At the annual meeting of the directors of The Columbus Varnish Co., it was voted to increase the capital stock to \$400,000. This company not only makes varnishes for all purposes, but are the sole makers of Peerless Automobile Specialties, well known to the automobile trade, to keep all cars looking bright and new.

* * *

Comet Plant Rising Rapidly.

The erection of the plant of the Comet Automobile Co., Decatur, Ill., is proceeding rapidly and will continue until the factory is completed, despite the winter weather. The south 200 feet of the first factory building which is to be 600 feet long by 150 feet wide, is nearly completed. It is expected that the first factory building will be completed by Jan. 20. It is a winter concrete job, although it was formerly considered impossible to build a concrete structure in cold weather. The mixed concrete, heated to a very high temperature, is poured into the forms and covered with tarpaulin, which keeps in the heat and prevents freezing. North of the first 600-foot building will be erected the power house and north of the power house another building of the same dimensions as the first, 600x150 feet. The floor space furnished by the two buildings will total 100,000 square feet.

* * *

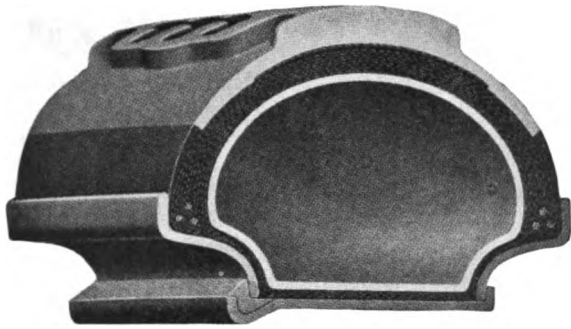
Hawkeye Incorporated for \$300,000.

The Hawkeye Truck Co., Sioux City, Ia., has been incorporated for \$300,000 to take over the business of the Hawkeye Mfg. Co. Officers and stockholders of the new concern are R. A. Bennett, president; F. W. Kemp, vice-president; A. T. Bennett, treasurer, and L. D. Baggs, secretary. The Hawkeye Mfg. & Repair Co. commenced building trucks two years ago. During the present year the company has expanded 500 per cent in supplying the demand coming from the territory surrounding Sioux City.



HOW CHAMPION SPARK PLUG CO. ADVERTISES LOCAL AUTOMOBILE SHOWS

The Champion Spark Plug Co., of Toledo, O., has adopted this plan of gaining the goodwill of dealers and associations in various cities where automobile shows are being held. The posting campaigns, urging the public to "Visit the Automobile Show" and "See the Champion Exhibit" are started two weeks prior to the opening of the shows. The plan, according to the Toledo manufacturers, has proved most successful.



CROSS SECTION OF 37 x 5 McNAULL TIRE AS APPLIED
TO A FIRESTONE QUICK DETACHABLE RIM

McNAULL TIRES ARE DIFFERENT

DOUBLE OVER-SIZE

DOUBLE MILEAGE

Rim Cuts Impossible
Punctures Seldom

Curb Cutting Eliminated
Attractive in Appearance
Fits Any Standard Rim

Blowouts Practically Unknown
More Resilient

Why? It Will Pay You to Investigate.

See our exhibit at San Francisco Auto Show, Accessory Department.

DISTRIBUTORS

McNAULL COMPANY OF PACIFIC COAST
VAN NESS AVENUE AT McALLISTER STREET
SAN FRANCISCO

McKEE LENSES

Add 63% to road light and
allow no light above 42 inches

The best and most efficient lens made

Prices from \$2⁷⁵ to \$4²⁵ a pair

AGENCIES NOW BEING PLACED

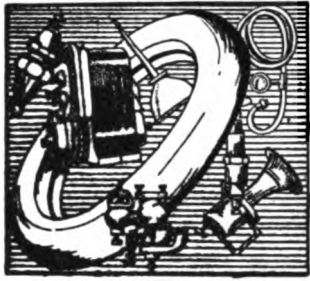
HOWARD AUTOMOBILE COMPANY

SAN FRANCISCO

LOS ANGELES

PORTLAND

OAKLAND



New Things in the Accessories Field

SMITH WHEELS ON THE PACIFIC COAST.

Motor truck builders on the Pacific Coast have been quick to recognize the superiority of Smith wheels, manufactured by Smith Wheel, Inc., Syracuse, N. Y. Unaffected by weather or climate conditions, these light, strong and everlastingly serviceable wheels retain their original shape, remaining round and true under all circumstances. This fact, together with the hollow construction and multitude of internal braces in the felloe, which radiates the injurious heat, caused by road friction, away from the tires, enables them to deliver a far greater tire mileage than any other make of wheel, to say nothing of the increased mileage from gasoline.

The Moreland Motor Truck Co., of Los Angeles, has standardized on Smith wheels for its 1½-, 2½-, 4- and 5-ton trucks; De Martini, of San Francisco, on their 2- and 3½-ton trucks; Kimball, of Los Angeles, who have just started in business, on their 2½-, 3½- and 5-ton trucks.

Smith wheels are guaranteed for the life of the truck on which they are originally placed. Of the thousands upon thousands of these wheels now in use, the manufac-

turers report that they have never been called upon to replace a single one.

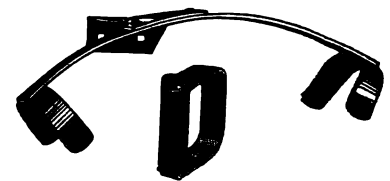
More than 60 well-known truck manufacturers and trailer manufacturers are now using Smith wheels regularly either as standard equipment for a part or all of their product, or as special equipment for customers who insist upon the best.

NEW ERA TIRE HOLDER AVOIDS STRAPS AND CHAINS.

The New Era "Better" Strapless Side Tire Holder is an improvement over other devices of this type. It is made of steel throughout, there are no cast parts to break or straps to wear out or become lost. The locking device is part of the holder and does away with the need for chains or cables to lock the casing in place. The tire supports may also be considered integral with the holder, dispensing with unsightly straps which wear out or are a constant temptation to theft. The New Era Tire Holder is manufactured by the New Era Spring & Specialty Co., Grand Rapids, Mich. It is sold single, double or for carrying rim at respective prices of \$2, \$3 and 1.50, to which ten per cent is added west of Denver.

CARBONIDE—A PERFECT CARBON REMOVER.

The Carbonide Mfg. Co. of California has just opened up a plant at 700 Polk street, San Francisco, for manufacturing and distributing Carbonide, a perfect carbon remover. Exhaustive tests by prominent motorists and business houses owning trucks have thoroughly demonstrated the



NEW ERA STRAPLESS SIDE TIRE HOLDER.

efficiency of Carbonide, and it has the added advantage that no mechanical adjustment of the carburetor is necessary for its use.

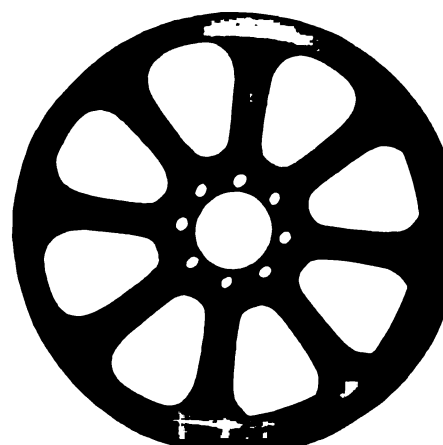
Being non-injurious to metals and non-corrosive, Carbonide appeals to the owner of every gasoline-driven vehicle, whether passenger car or truck, for with its use the motor can be kept carbonless and a better-running engine insured at a nominal cost.

The merits of Carbonide are so well understood that the manufacturers have had several substantial orders from foreign governments, whose experts recognize that being a carbon remover, it is a fuel saver as well. It is being marketed in several sizes in order to meet the demands of all classes of consumers.

NEW GAS SAVER PROVES A SUCCESS.

The new gas saver and power maker known as the Automizer is being distributed by the Automizer Sales Co., located at 276 Golden Gate Ave., San Francisco. The Automizer consists of an annular grooved flange which is placed between the carburetor and the intake manifold. The purpose of the groove, which is the feature of the device, is to collect the heavier portion of the gasoline after it has passed the carburetor valve and distribute it to the whole circumference of the air stream, forming a perfect gas.

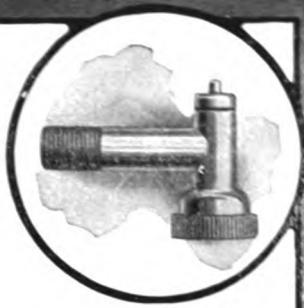
The Automizer attains its remarkable results not only because there is complete combustion of fuel, but because it protects the crank-case oil from dilution by the heavy portion of the gasoline used today, which otherwise goes into the cylinders in liquid form. This ruins the crank-case oil by lowering its flash-point and causes it to char on the cylinder walls with every explosion, which creates great friction with loss of compression and power. The Automizer makes the engine and car run evenly and smoothly. The Automizer has been tried out in a series of exhaustive experiments on cars and trucks and in every case where the installation was correct the results have been truly remarkable in giving increased oil and gasoline mileage as well as more power.



FRONT AND REAR SMITH WHEELS FOR 3½-TON TRUCKS — SHELDON TYPE.

FRONT AND REAR SMITH WHEELS FOR 3½-TON TRUCKS — TIMKEN TYPE.

No Trouble to Pump Tires



Perhaps you have been neglecting the all-important matter of tire-pumping and air-testing because of the exertion it involved; the time it took, and the annoyance it caused. You no longer have that excuse, for with a

Schrader Universal Pump Connection

tire-pumping and air-testing are now simple and easy operations. Ask your dealer to show you how it works.

Price in U. S. A.
Thirty-five Cents

At your dealer or

A. Schrader's Son, Inc.
783-803 Atlantic Ave., Bklyn.
London Chicago Toronto

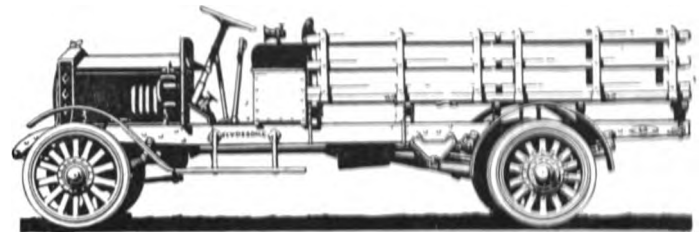


CLYDESDALE



Motor Trucks of $\frac{3}{4}$ Ton to 5 Ton Capacity

THE CLYDE CARS CO., Clyde, Ohio



Special Display of INDIANA TRUCKS

in 1, 2, $3\frac{1}{2}$ and 5 ton models
during week beginning Feb. 16th

at Our Show Rooms

1242-46 Mission Street

*YOU have not seen the truck
show until you have seen the*

INDIANA

**MOTOR DISTRIBUTERS
COMPANY**

CALIFORNIA'S GREATEST MIDWINTER ATTRACTION

Gorgeous Garden Moulded
From Millions of Oranges

"COURT OF ALLIES"

Composed of Southern
California's Most
Beautiful Women

Unique Exhibits
Seven Bands
Auto Show
Midway

8TH NATIONAL
ORANGE SHOW
SAN BERNARDINO
FEBRUARY 20-28TH

**8 TRAINS
DAILY**

From Main Street
Station, Los Angeles

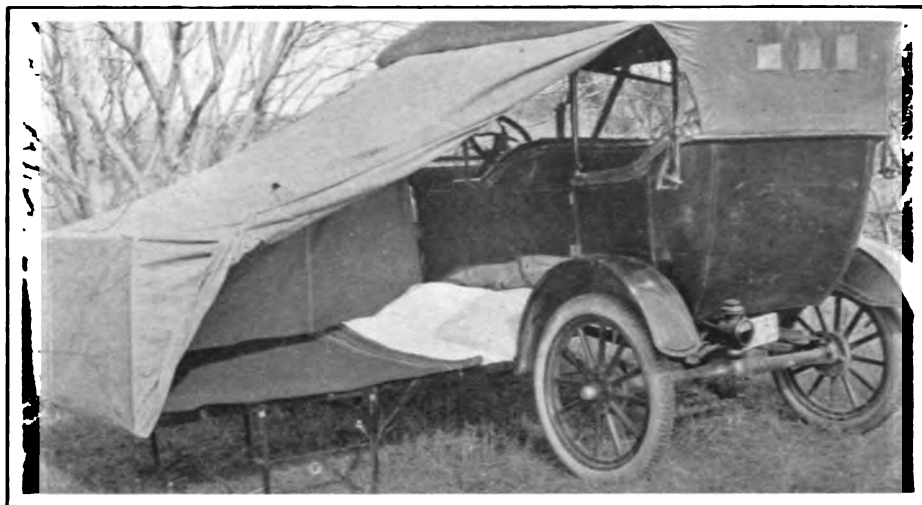
3:00 A.M.	2:30 P.M.
7:30 A.M.	4:35 P.M.
9:00 A.M.	7:40 P.M.
11:15 A.M.	11:15 P.M.

Direct to
Entrance of the Big Show

Round Trip
Excursion Fare
From Los Angeles **\$2.50**

Buy Excursion Tickets from Agents
not on sale by Conductors

Pacific Electric Railway



COMFORT, CONVENIENCE AND COMPACTNESS MARK MILLER AUTO BED.

MILLER AUTO BED IDEAL FOR CAMPING.

The motorist who enjoys camping out will find in the Miller Auto Bed, manufactured by the Miller Auto Bed Co., 5501 Dover street, Oakland, Cal., a veritable boon. It is a regular spring folding bed, and is always ready for use, as mattress and bedding are enclosed in the bed when folded. The bed folds in the center. The frame at the end of the bed, which acts as a support for the tent, also acts as a retainer for the mattress and the bedclothes, holding them in position when the bed is folded over.

The tent is particularly noteworthy, as no tent-poles, ropes or pegs are necessary, the tent being fastened to the under side of the car top and also to the frame of the bed, leaving ample dressing room. The bed can be attached to any car, and when not in use on the car can be installed in the sleeping porch or spare bedroom.

ELECTRIC AND HAND GARAGE DOOR OPENERS.

The electrically operated Garage Door Hardware manufactured by the Allith-Prouty Co., Danville, Ill., has striking possibilities as regards the avoiding of trouble and saving of time taken up in leaving the car and opening or closing garage doors. The line includes two types, one operating by electricity and the other

by hand. The Electromatic Type, Ten-Twenty is a keep-your-seat proposition, whereby the mere pressing of a button located inside or outside the building will open or close the doors without the necessity of leaving the car. The Type Ten-Eighty is for garages with doors of the three-door construction, one of them a passage door, and is a hand operated outfit. The Electromatic outfit is operated by connecting it with the regular light circuit of the garage. Pressing the button turns on the lights, unlocks the doors and folds them back clear of the opening. When the buttons are placed outside the building they may be operated through a cylinder lock.

LIBERTY PLANE SUGGESTIVE OF OWNER'S PATRIOTISM.

The Liberty Plane is an attractive radiator ornament which puts an automobile and its owner in harmony with the spirit of these warlike times. It consists of a skillful miniature of an aeroplane, cast in aluminum, highly polished and decorated with the emblem distinctive of the American aviation corps in red, white and blue enamel on each wing. The ornament is weatherproof and will not wear out. The Liberty Plane is sold for \$1 and is manufactured by the Defender Auto Lock Co., Marquette Bldg., Detroit, Mich.



ELECTRICALLY OPERATED GARAGE DOOR OPENER WORKS FROM THE CAR SEAT.

SECURITY AUTO LOCK WILL STOP FORD THIEVES.

The Security Auto Lock has been put on the market by the Security Auto Lock Co., of New York, which company is owned by White Bros., 187th St., and Grand Concourse, Borough of Bronx. This device is a remarkable innovation and is a permanent part of the Ford, being placed directly under the steering wheel, applied by a special tool, and when locked, cannot be removed.

The principle of the lock is that it disengages the wheel from the steering post when the key is removed from the lock. In order to operate the car it is necessary to leave the key in the lock. When the key is removed, the steering wheel is disengaged from the steering post, it is free to spin around like a top, and the front wheels of the car are wild. Therefore, it will even be impossible to tow the car away. The lock retails at \$5.

WAYNE "DOUBLE-CORD" TUBE.

A new inner-tube, called the Wayne "Double-Cord" Tube, will soon be introduced on the Coast by C. A. Fitch, of the Fitch Rubber Co., Los Angeles. The tube is the invention of H. N. Wayne, who has had many years' experience in the manufacture of high-grade rubber goods and has developed, in the last few years, several valuable patents in connection with automobile tire construction. For this new invention of his he claims qualities of strength, elasticity and endurance superior to those of any other tube.

The virtue of its strength is derived from "cords" such as are used in constructing the well-known and popular Cord Tire, but these cords are arranged in such a manner as to give the tube a straight side wall resistance of about 200 pounds to the square inch, without impairing the elasticity or in any way destroying the resilience necessary in a perfect air tube.

The above reproduction of the tube certainly looks substantial enough to accomplish all that the inventor claims for it; these claims being, in effect, that the "Double-Cord" tube will make blowouts disappear entirely from the list of troubles of the motorist; will increase the life of the tire itself over 100 per cent and insure easy riding by eliminating vibration. In other words he promises to remedy most of the existing defects and weaknesses of the troublesome automobile tire by giving it a dependable inner support in the form of a scientifically reinforced tube.

We do not know if these tubes will match up to all the claims made for them, but Mr. Fitch has so far dispelled our skepticism that we await with much interest their early arrival.



SHOWING CONSTRUCTION OF WAYNE DOUBLE-CORD TUBE.

A—Best quality red tube stock. B—Knitted cord reinforcement (allowing lateral expansion). C—Straight cord reinforcement (allowing longitudinal expansion). D—Cushion of same red tube stock (completely surrounding the cords). E—Standard tire casing.

Investment vs. Expense

A cheap porcelain plug is a double expense. **FIRST:** It needs frequent renewals on account of breakage and sooting. **SECOND:** It's a waster of gas and money.

HERZ PLUG

"Bougie Mercedes"

once properly installed ask only one favor of you, viz.: to leave them alone.

They last as long as your pistons and crank shaft—a real investment.

They insure perfect and vigorous combustion of all the gas. Let us educate you up to Herz Plugs. They're \$1.50 at your dealer's, or



\$1.50

at your dealer's

or

HERZ & CO.
245 W. 55th St., New York



FOR EFFICIENCY

YOUR engine is no better than its ignition and cannot be.

BOSCH MAGNETOS

are the world standard of efficient and dependable ignition.

TO insure yourself satisfaction, whether as manufacturer or owner, specify Bosch.

Bosch Magneto Co. - - New York
Coast Branch: 1324 Van Ness Ave., San Francisco

Coast Distributors: E. A. Featherstone, Los Angeles
Ballou & Wright, Portland and Seattle
Kimball-Upson Co., Sacramento

PISTON SERVICE



Light Weight, Any Make

Cast Iron Pistons

Are the BEST by TEST

FINISHED

SEMI-FINISHED

or ROUGH

LARGEST PRODUCERS IN THE WEST

W. H. JAHNS AUTO MACHINE WORKS

908-912 West Pico St.

Los Angeles, Cal.



HOTEL ST. FRANCIS San Francisco

Center of the City's Life and Color

EUROPEAN PLAN FROM \$2.00

Management - James Woods



SAN FRANCISCO DELIVERY WAGONS WITH McNAULL TIRES GIVE GOOD SERVICE.

McNAULL TIRE FIRMLY ESTABLISHED ON COAST.

Nine years ago a gentleman in Toledo, Ohio, by the name of McNaull, who was a steam-boiler manufacturer by vocation, after a day spent in his big Winton Six with continuous tire trouble, decided he was going to improve upon the construction of the pneumatic tire. "I will build a better automobile tire if it takes the balance of my life to accomplish it!" was the determination of this sturdy little Scotchman.

Two years of experimental work were followed by the beginning of the manufacture, in a small way, of McNaull Tires. Some improvements have been made since that time, but the fact is that today there is a million dollar corporation behind the McNaull Tire with a modern factory in Toledo, Ohio, working 24-hours a day to keep up with orders.

For the past two years the McNaull Co. has had its eyes longingly east Coastward, but not until last November was it justified in making an attempt to supply the demand it was bound to create in this very excellent field. The company has opened its Pacific Coast headquarters at 500 Van Ness Avenue, corner of McAllister Street, San Francisco. A store has been opened at 1223 South Hope Street, Los Angeles, to take care of Southern California, and other distributing centers will be at Phoenix, Ariz., Portland, Oregon, and Seattle, Washington—all under the supervision of the Pacific Coast headquarters in San Francisco.

This tire is so constructed that it entirely does away with rim-cuts, practically eliminates blow-outs because of less friction, and lessens the chance for punctures. It is more resilient than the ordinary tire and very attractive in appearance, being about 40 per cent over-size. It is listed at about the same price as other standard makes. San Francisco already has several users who are testifying to its many advantages.

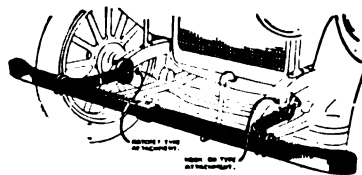
The widest point of the McNaull Tire is at the bead, the side-walls being supported by a pair of steel flanges which finish out the tire and fit into the rim where the bead of the ordinary tire is located.

The company's exhibit this year in the necessary department of the San Francisco Automobile Show is bound to create unusual interest because of the tire's radical difference, without the sacrifice of the pneumatic principle.

NEW ERA "BETTER" SPRING BUMPERS.

The New Era "Better" Spring Bumpers for the front and rear of all makes of cars are a drum-like rebound by means of a stented double bar, which is tied in center to make both act simultane-

ously. Ninety per cent of previous stocking troubles are eliminated by the New Era patented construction of all bars being the same for ninety-three per cent of the total number of cars manufactured in this country. Two methods, the ratchet disk and the hook-on methods, are used for attaching New Era Bumpers to the front end of cars. The ratchet disk is for cars of goose-neck frame construction and where there is no splash pan (generally old models). For cars equipped with splash pan or extended mud guards the hook-on type of construction is used. For some of the various rear constructions three-quarter type of fitting is used and



NEW ERA "BETTER" SPRING BUMPER.

with one of the three types of fittings—ratchet disk, hook-on or three-quarter—New Era Bumpers can be attached to the rear of the majority of cars. The main bars are of highly tempered spring steel, while the short detachable attaching arms are only semi-tempered so that they will bend under any severe shock, causing little if any damage, and are replaced free. New Era "Better" Spring Bumpers are manufactured by the New Era Spring & Specialty Co., Grand Rapids, Mich. West of Denver ten per cent is added to the regular prices on standard New Era Bumpers of \$10 for black and \$11.50 for nickel front.

ROEDDING TAIL SIGNAL GIVES FEELING OF SAFETY.

Nearly every car-owner has felt at times the unpleasant uncertainty which he has voiced in the reflection, "I wish I knew just what that fellow ahead is going to do." The car-owner ahead is just as unwilling to be party to a collision as those behind and frequently suffers the suspense lest his signal for turning, slowing down or stopping has not been conspicuous enough to catch the attention of the drivers behind him. The Roedding Signal Tail Light is claimed to be the effective device for relieving this familiar moment of fear. It consists of a small cylinder attached to the back of the car and is operated by means of a little disk conveniently placed on the door or steering wheel, which instantly transmits to the cylinder the signal of the driver's intention to turn to the "right" or the "left," to "stop" or "back." Pressing the button

in the center also sounds the horn. Pressing the button allows the usual light to re-appear in the signal. The Roedding Signal is automatic, operated from storage battery or dry cell. It may be attached by the car owner in a few minutes. The price is \$18. K. J. Barkoot, Chamber of Commerce Bldg., Detroit, is sole distributor.

HUMBOLDT ADDS TO LARGE LINE OF FORD ACCESSORIES.

The Humboldt Machine & Stamping Co., Long Island City, N. Y., has recently announced eight new additions to its line of accessories for the Ford car. The new items are: the Humboldt Press Steel Brake Shoe, selling per set of two at \$2; the Auxiliary Radius Rod, \$1; the Adjustable Heel Rest, 75 cents; the Foot Accelerator, \$1; the Cradle Tire Carrier in four types, two for rear and two for side, and priced at \$4.50, \$6, \$6.50, and \$8.50; the Push Button Holder, 25 cents; the Adjustable Fan Belt, 50 cents; and the Kant Slip Fan Belt Guide, 20c.

ADVANTAGES OF THE SUN-RAY LENS.

Dr. C. W. Waggoner, illuminating engineer of the University of Virginia, spent more than a year working out the principle and construction details of the Sun-Ray Lens, manufactured by the Prisolite Co., of Columbus, O.

Dr. Waggoner observed that the lens which concentrates the light on the road ahead frequently throws the beam into the eyes of approaching motorists because of the uneven surface of the road. Moreover, the concentrated beam did not give any light at the side of the road, making it extremely dangerous to drive at night. On the other hand, it was apparent that the lens designed to avoid the direct beam by diffusing the light rays over 360 degrees of a circle is not economical because the light thrown skyward is wasted.

With these two objections in mind, Dr. Waggoner set about to find a lens that would fill the bill. The Sun-Ray Lens is the result.

After a year of careful calculations, Dr. Waggoner succeeded in refracting the ray downward by a series of horizontal prisms so that double the amount of light is thrown on the road ahead. By a second series of vertical prisms, he also threw the light on the sides of the road. These vertical prisms break up the concentrated beams, eliminating all glare. Thus, the lens gives all the advantages of total diffusion with none of its disadvantages, and also gives all the advantages of deflection without its faults. The Sun-Ray Lens is said to meet the requirements of every state in the union.



FRONT VIEW SUN-RAY LENS

GARAGEMEN

OUR 1918 CATALOG SERIES E of Gears and Axle Shafts

Covering 150 Different Makes of Cars

NOW READY FOR MAILING

Ask Us For It -:- Mailed Free On Request

*If You Are a Jobber
or Auto Wrecker
Mention the Fact*

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THE CAR

OLYMPIAN

The Sensation of the New York and Chicago Shows!

**BEAUTY, POWER, SPEED
AND ENDURANCE**

The Olympian has all that—and more!

It has smooth-running, high-speed, four-cylinder engine that averages 18 miles on gallon of gas.

It has a 114-inch wheelbase, shock absorbing cantilever rear springs, and deep, soft upholstery. This combination of advantages gives you a restful ease of riding unapproached in any other car selling at anywhere near the Olympian price—\$1095, here.

The Olympian is the most complete car built. It comes to you equipped with a bumper, a spotlight, a motometer and an ignition lock. Necessities all—but found in combination on no other car.

**See it at the Pacific Automobile Show
San Francisco**

\$1095 here

CALIFORNIA MOTOR SALES CO.
STATE DISTRIBUTORS

Los Angeles

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Interesting Proposition to Dealers; Write, Wire or Call

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Whitney Chains
Kellogg Pumps
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Roller Bearings
Rex Metal Polish
Wasson Piston Rings
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Sheldon Axle & Spring Co.	Buda Co.
Brown-Lipe Gear Co.	Smith Wheel, Inc.
Brown-Lipe-Chapin Co.	The Brown Co.
Ross Gear & Tool Co.	Veeder Manufacturing Co.
Spicer Manufacturing Co.	

ALFRED H. COATES

WESTERN REPRESENTATIVE

41 Spear Street

San Francisco, Cal.

Prevents Ford Rear Axle Trouble



\$3.75

**Exact
Replacement**

Your Ford need not be "laid up" for rear axle repairs a single day this year if you replace plain thrust washers (parts 2528-9) at gear side of differential with a Bailey Ball Thrust. Because plain washers having a friction-creating sliding contact wear thin, cause gears to get out of mesh, become noisy and break—but a

BAILEY BALL THRUST

will not wear because it contains eighteen 1/4-inch micro-chrome steel balls that form a frictionless rolling contact—hence no wear, and they are bound to keep gears in perfect mesh, make them run smoothly, quietly and without power wastage. No noisy gears, no stripping, no frequent repair bills, in fact, smooth, all-power-possible energy from your axle with a Bailey.

ALL OTHER CARS

Except the Ford and some Chevrolet 490's are equipped with ball or roller bearings to take this gear thrust. Large corporations everywhere operating fleets of Fords are installing Bailey Ball Thrusts, thereby adding power and saving fuel and repair costs.

Be forehanded—see your dealer-repairman today. A mere explanation of the outstanding features of this bearing will convince you it is something your good judgment and purse demand.



Left Side of
Differential.

GUARANTEED

Bailey Ball Thrusts, made of the finest materials, heat treated and ground, have a capacity for six times the maximum thrust (pressure), and so we unqualifiedly guarantee every bearing to "stand up" under all strains and hardships.

Go to your dealer—have him install a Bailey. Price, \$3.75.

Dealers, repairmen and garagemen, write your jobber. Be ready—national advertising will send customers to you.

GEO. D. BAILEY CO.

1116 S. Michigan Ave.

Chicago, Ill.



Seattle, Wash.—The Sunset Electric Co. has secured exclusive distribution rights for the automobile electric equipment manufactured by the Westinghouse Electric & Mfg. Co.—An authorized agency for Maxwell and Chandler cars and Maxwell one-ton trucks has been opened at 579 S. Railroad Ave. by C. M. Winningham and A. W. Kline.

Walla Walla, Wash.—Wood & Lane, handling Oldsmobile, Cadillac and Maxwell cars, have occupied their new two-story building, 100x120 feet.

Centralia, Wash.—Following the expansion of their territory to include Lewis county, Little & Kennedy, Oldsmobile agents for Pierce county, have opened a branch agency here.

Spokane, Wash.—J. C. H. Reynolds has been elected managing secretary of the Spokane Automobile Chamber of Commerce.—The Main Ave. Garage has been completed and has opened for business, with 10,000 square feet of floor space.

Bellingham, Wash.—The Highway Garage has been bought by C. E. Thomas, who has taken over the Whatcom county agency for Studebaker cars and trucks.

Pasadena, Cal.—Nelson & Price, of Los Angeles, have opened a branch house here to sell Kelly-Springfield and Hartford tires, for which they are agents.

Los Angeles, Cal.—W. K. Hillyard, Pacific Coast distributor of Long Distance spark plugs, has joined the army and has sold his agency rights to Jane & Baker, 1044 S. Olive St.

Sacramento, Cal.—Spring & Louthain, Inc., of the Lincoln Highway Garage, have taken the Nash car agency.

Hood River, Ore.—The Snow-Forden Motor Co., Inc., has been formed here by W. G. Snow, J. R. Forden and S. M. Dick, who have purchased the Cascade Garage.

Great Falls, Mont.—The second annual Montana automobile show will be held here, March 16-20.

Sonora, Cal.—The Central Garage has been leased by Albert Hamblen and James O'Neil.

Portland, Ore.—The Autoparts Supply Co. has occupied enlarged quarters at Sixth and Oak Sts.

"Exide" Batteries

DISTRIBUTORS

We Repair all makes of Batteries, Generators, Coils, Magnetos and Starters

PROMPT ATTENTION GIVEN TO COUNTRY TRADE

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GRID
BATTERY

The Best of Batteries

There may still be an opportunity to obtain selling rights in your territory if you act quickly.

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BRANCHES:
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37 Spear St., San Francisco.

40% Longer Life



HARROUN

A car of popular price, designed by Ray Harroun, in which a new type of four-cylinder motor develops revolutionary power and efficiency.

Harroun Motors Corporation

General Offices and Plants, Wayne, Mich.



Prepare Now For Your Vacation Get a folding spring bed that encloses your bedding and has tent attachment on bed, doing away with tent poles, ropes and pegs.

MILLER AUTO BED CO., 5501 Dover St., Oakland, Cal.

88 Manufacturers
Give their cars the "Vital Spark" through

AC *The Standard Spark Plug of America*

Dependable at all speeds. The Trade Mark—"AC" is burnt into the porcelain

Champion Ignition Company
Sole Manufacturers Flint, Michigan



No motor car equipment is complete without a can of

CARBONCIDE

The perfect Carbon Remover. Non-injurious to metals, non-corrosive and no mechanical adjustment of the carburetor required to use. Freedom from carbon, more mileage and a better running engine insured. Truck owners especially will find CARBONCIDE an immense advantage.

CARBONCIDE MFG. CO. OF CAL.
700 POLK STREET SAN FRANCISCO, CAL.
See us at Booth 120 at the Automobile Show

Larkins & Co.
ESTABLISHED 1865

Designers and Builders of High Grade Automobile Bodies

*Special Tops — Upholstering — Painting
Proper Facilities*

Van Ness at California St., San Francisco

FORD CAR OWNERS USE KEROSENE
(Coal Oil)

One Mile on Kerosene Costs Less than $\frac{1}{2}$ cent
One Mile on Gasoline Costs From $1\frac{1}{4}$ to $1\frac{1}{2}$ cents

**BUY A DETROIT
KEROSENE EQUIPMENT**

Save 60% Price of Equipment \$25 f. o. b. Detroit
30 days Trial or MONEY BACK — ACT PROMPTLY!
These are days of strict economy

DETROIT KEROSENE CARBURETOR CO.
KRESGE BLDG. Department 16 DETROIT



An equitable adjustment is the second best thing a tire manufacturer can make. The first best thing is to make a tire like the Kelly-Springfield.



Kelly-Springfield Tire Co.
Executive Offices
Seventh Ave. at 57th St., New York.
General Sales Department
1900 Euclid Ave., Cleveland, O.

Los Angeles, Cal.—The Whitney-Marshall Tire Co. has been formed by R. A. Whitney and W. P. Marshall; quarters have been opened at 707 S. Hope St.—W. D. I. ham, authorized Ford agent, has moved into new quarters at 1250-60 W. Seventh St.—Jonas and Paul Imgluck have leased quarters at 320 W. Pico St. for a general tire and vulcanizing business.—The Damon Special Co. has moved into new quarters at 516-18 E. Ninth St.—The Dustin-Roman Auto Top Co., capital stock \$25,000, has been incorporated by George F. Dustin, John Roman, W. J. Miller and M. M. Moore.—The Southern California Truck Mfg. Co., capital stock \$150,000, has been formed by H. L. Bidelman, W. P. Bidelman, Claud R. Crump, B. McCall and Frank B. Romo.
* * *

Fresno, Cal.—Harry Bonds & Son have been appointed Inter-State dealers for this locality.
* * *

Stockton, Cal.—C. G. Patmon has bought the entire interest of Cole & Patmon in the Class A Garage.
* * *

Bakersfield, Cal.—Ford Bros. of the Down-Town Garage have taken the Kern county agency for the Premier car—W. F. Hubbard has become Velie dealer for Kern county.—The Earle C. Anthony Co., Inc., has moved into its former State Highway Garage.
* * *

San Diego, Cal.—The Auto Shop has been opened here as successor to W. A. Alderman.
* * *

Rio Vista, Cal.—A two-story brick garage will be built here for H. B. Holmes, costing \$15,000.
* * *

Carpinteria, Cal.—The Carpinteria Garage & Truck Co. has been incorporated by James K. Catlin, C. D. Hubbard, H. R. Olney and G. G. McLean.
* * *

Stockton, Cal.—The San Joaquin Auto Trade Association will hold its annual show here, April 9-13.
* * *

Richmond, Cal.—F. H. Reid and G. B. LaRose have purchased the Hilliard Automobile Co. and will handle the Buick agency and a general garage business under the name of the Richmond Automobile Co.
* * *

San Andreas, Cal.—Tiscornia & Bertholdi have opened a garage here.
* * *

Phoenix, Ariz.—The Miller Brake Sales Co., capital stock \$100,000, has been formed by H. M. Harrison and D. M. Foster to manufacture and deal in fixtures, brakes and accessories.—Smith-Hughes & Co. have been incorporated, with \$30,000 capital stock, to wholesale and retail cars and accessories; incorporators: W. Taylor Smith, C. K. Hughes and W. J. Schiedler.—The Perfection Auto Window Co. has been incorporated for \$100,000 capital by H. M. Harrison and D. M. Foster.—Kriss & Watson have opened an automobile painting establishment.

On Exhibit at Booth No. 125

Our Latest Product:

Cork Insert Brake Lining
FOR ALL MAKES OF CARS

Also Our

Cork Insert Transmission Lining
FOR FORD CARS

and

Cork Insert Fan Belts
FOR FORDS


FOR SALE BY ALL JOBBERS AND DEALERS

Advance Automobile Accessories Corp.

PACIFIC COAST SALES BRANCH

214 KOHL BLDG.


SAN FRANCISCO, CAL.



INTER-STATE

The best light car on the market today. Economical in every way, and tremendous Power. Once an Inter-State owner always an Inter-State owner.

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"The Car of the Hour"
Big, Beautiful, Impressive, Powerful, Dependable, Economical
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4-Passenger Roadster **\$1095**
5-Passenger Touring Car.....

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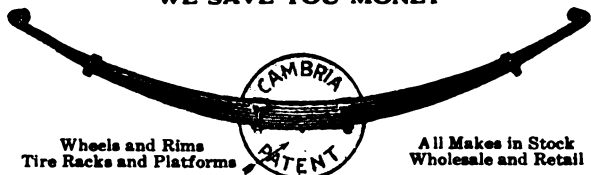
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"WE SAVE YOU MONEY"



Wheels and Rims
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CAMBRIA
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All Makes in Stock
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AUTO AND TRUCK SPRINGS
Demountable Rims Sold and Applied
Spring Steel Bumpers
SPRINGS REPAIRED, FORGINGS AND FRAMES STRAIGHTENED
Factory: 913-921 So. Santee St., Los Angeles, Cal.
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RADIATORS and FENDERS REPAIRED

ALSO BODIES, TANKS AND HOODS

Best Copper Radiator Core Installed Here

Motor Car EQUIPMENT REPAIRS Company

1246-48 SOUTH LOS ANGELES STREET
Modern Fireproof Building

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Save the Nation's Gasoline with the

SUNDERMAN \$6

Vacuum Carburetor

This price maintains on Ford and Metz models
Other cars \$8 and \$10, depending on fittings necessary
This perfect carburetor will save you, no matter what your car, from 30 to 50% in your gasoline consumption. At the same time it will give your motor power, speed and flexibility beyond your fondest hopes.
It's your duty to your country to save gasoline when you can. It's a dealer's duty to promote the sale of an instrument that will cheapen the cost of running a car.
Send in your orders now—Fall is a big carburetor season

SUNDERMAN CORPORATION
17 Chambers Street (Dept. C) NEWBURGH, N. Y.
Western Office: 403 Kresge Bldg., Detroit.

"The Light That Shows the Road"



SAFETY FIRST—BUY AN S & M

Complies with the California State Law without interfering with its usefulness in reading house numbers, road signs, etc. For sale by all Jobbers and Dealers of Automobile Accessories.

25413
S & M LAMP CO. 117 West 38th Place
LOS ANGELES

MILLER CARBURETORS

More Power, Speed and Miles
to the Gallon

Gasoline or Distillate

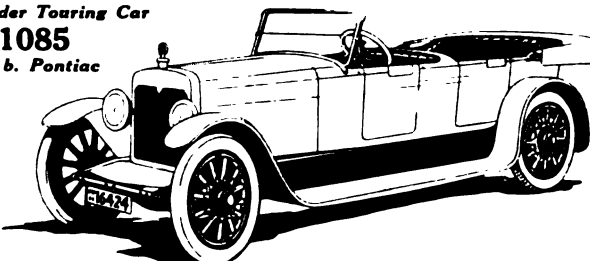
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1143 VAN NESS AVENUE

OLYMPIAN

One Hundred Percent Car

Write for dealer proposition

4-Cylinder Touring Car
\$1085
f. o. b. Pontiac



OLYMPIAN MOTORS COMPANY, Pontiac, Mi

"A Most Satisfactory Motor Oil"

Saxon

—Dubroy Motor Co., San Francisco—"From our own, and the experiences of Saxon owners, we know Zerolene to be a most satisfactory motor oil."

Packard

—Cuyler Lee, San Francisco—"It has proven entirely satisfactory."

Chevrolet

—J. W. Leavitt & Co., Los Angeles—"Zerolene is our choice for use in Chevrolet cars."

Ford

—The Universal Motor Co., Sacramento—"have no hesitancy in recommending it to Ford owners."

Thus endorsed by Leading Car Distributors

—because the records of their service departments show that Zerolene, correctly refined from California asphalt-base crude, gives perfect lubrication—less wear, more power, least carbon deposit.

ZEROLENE

The Standard Oil for Motor Cars

Dealers everywhere and at our service stations.

Standard Oil Company

(California)

Santa Barbara, Cal.—Franklyn Ritchie, Packard dealer here, was killed recently in an automobile accident.—The Arlington Garage has been leased by Robert Shepard.—A branch establishment has been opened here by the Tire Construction Co., of Los Angeles, under management of T. S. McChesney.—Dunham, Carrigan & Hayden Co. have been given the Dreadnought tire agency for the city of San Francisco.

* * *

Oakland, Cal.—A. E. Berg, Contra Costa county distributor for Federal tires and Veedol oils, has occupied new quarters on Broadway near Twentieth St.

* * *

San Francisco, Cal.—Contracts have been let here for the erection of a building to be occupied by the United Motors Service Co. of New York and the Bearings Service Co.; the new structure will be located at Van Ness Ave. and Clay St., will have dimensions of 140x125 feet and will cost \$30,000.

* * *

Seattle, Wash.—The Owl Garage Co. has leased a four-story building to cost \$50,000, to be erected at Fourth Ave. and Terrace St.—The Wire Wheel Service Co. to give service on Houk wire wheels, has been formed here by H. O. Nygard, Chester A. Gunderson and B. C. Deaton. James A. Smith, representative for the Gates Half-Sole tire, has purchased a building at 2020 Westlake Ave.—The Willard Storage Battery Co. will act as Seattle service station for the Willard battery.

* * *

Sacramento, Cal.—Rice & Forrest, Hupmobile and Haynes dealers, have added the Garford truck agency for Sacramento county.

* * *

Spokane, Wash.—The Inland Battery Co., 116 S. Monroe St., has been appointed to give service on Willard storage batteries.

* * *

Deseret, Utah.—John Dewsnap will handle the Kissel-Kar here.

* * *

Price, Utah.—W. C. Brooker has been appointed to give service on Willard storage batteries in this locality.

* * *

Elko, Nev.—The Elko Lumber Co. has taken the Kissel-Kar agency.

* * *

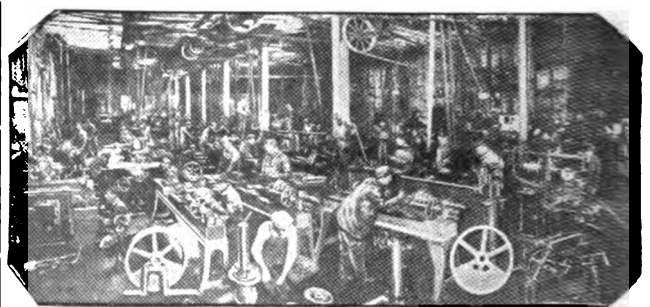
Yuma, Ariz.—The G. R. Walters Auto Electric Service has been appointed Willard battery service station.

* * *

Olympia, Wash.—The Olympia Auto Supply Co. has taken the Kissel-Kar agency.

* * *

San Pedro, Cal.—The Long Beach Rubber Co., of Long Beach, has opened a branch store here to handle Diamond tires in the harbor district.



Machine Shop, Polytechnic Engineering College, Oakland, Cal.
WONDERFUL OPPORTUNITY FOR BOYS AND MIDDLE AGED MEN.

Boys and middle aged men are wanted by the thousands to train for positions as mechanics and special automobile engineers—highest salaries ever paid in America—beginners are receiving \$5 to \$6 per day. We have the best equipped shops and do more practical work than any other school in the United States. Six months' training will prepare you. Write for catalog. **Oakland is now the Great Shipbuilding and Industrial Center of the West.**

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SPRINGS

WHEELS, BUMPERS
FORGINGS

Wholesale

Retail

UNITED STATES SPRING CO., Inc.

Successors to A. & F. SPRING CO.,

1120-22 South Los Angeles Street, LOS ANGELES.

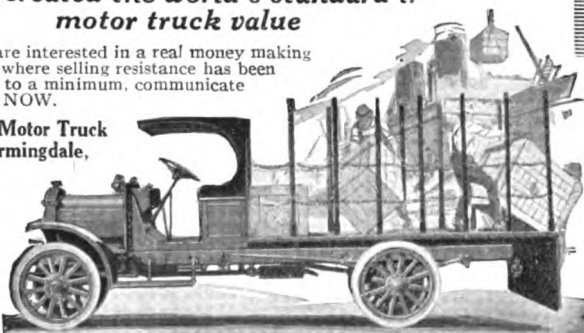
THE FULTON TRUCK

1½ Ton Capacity

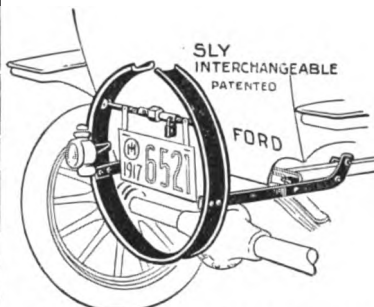
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If you are interested in a real money making
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reduced to a minimum, communicate
with us NOW.

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Co., Farmingdale,
L. I.,
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BE UP-TO-DATE ON TIRE CARRIERS



The strap kinds are ob-
solete and unsightly.
The Sly interchangeable
—Ford or Chevrolet
quickly—neatly does the
trick—take any casing
or demountable—cost no
more. Beware of imita-
tions. If your Jobber
doesn't list, write us for
complete catalogue — of
real Carriers and "Bet-
ter Springs."

NEW ERA SPRING & SPECIALTY CO.

1190 Hamilton Ave.,
Grand Rapids, Mich.



Double Seal Piston Rings

DOUBLE SEAL RING CO.

515 Eddy Street, SAN FRANCISCO

Positively the only ring made that absolutely
seals the wall of the cylinder and the joint in
the groove.

See us at the Pacific Auto Show and let us
prove it to you.

OTHER PACIFIC COAST BRANCH

603 West Pico Street

LOS ANGELES, CAL.

A P E X

Motor Oils

THE HIGHEST POINT OF EFFICIENCY

Gasoline "with the Punch"

PUENTE OIL CO.

Oldest Refiners and Producers on the Coast

GRÜSS AIR SPRINGS

The Luxury Shock Absorber for Quality Cars at

CARTER & VANBERG'S

775 Towne Ave.

Bdwy. 8306.

LOS ANGELES.

MOTOR WEST

Reaches a larger percentage of dealers than
any automobile publication circulated on the
PACIFIC COAST.

PRESSED STEEL PARTS FOR AUTOMOBILES AND TRUCKS

ESTIMATES CHEERFULLY FURNISHED

The Bossert Corporation

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NEW YORK

BEST IN THE LONG RUN

A Classic among Classics

MODELED as by a sculptor, the lithe gracefulness of the classic Goodrich Silvertown Tire would fit harmoniously into the classic company of an art gallery.

These patrician tires dress any car with an individual elegance, give it a smoother riding comfort, found only where you find the Red Hallmark of tire quality and service, The Red Double-Diamond.

The elegance outside clothes strength within—the structural strength of the patent-protected cable-cord tire body, and the proven strength of Goodrich Tested Tires—**BLACK SAFETY TREADS, or SILVERTOWN CORDS.**

Leagues upon leagues of grinding and ploughing against real road conditions prove for you the certainty of the long mileage, and freedom from tire trouble of "America's Tested Tires."

GOODRICH
TESTED TIRES

The B. F. Goodrich Rubber Co.

THE CITY OF GOODRICH · AKRON, OHIO.

FAIR TREATMENT

THE TESTED TIRE

THE NEW YORK
PUBLIC LIBRARY
ASTOR LENOX
TILDEN FOUNDATION

Motor West

THE MOTORING AUTHORITY OF THE PACIFIC COAST



VOL. XXV No. 10

MARCH 1, 1918

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A Hundred Million Copies
of the Best Periodicals Display

Champion Ads

Dependable Spark Plugs Big Ones

This Year



TWO-PAGE and page advertisements in The Saturday Evening Post, full pages in Collier's Weekly, Literary Digest and Popular Mechanics—

Good big ads in The Christian Herald, Sunset Magazine, Country Gentleman, Successful Farming, National Stockman and Farmer, Breeder's Gazette, Hoard's Dairyman any twenty other agricultural publications—

In all, over a hundred million big advertisements of Champion Dependable Spark Plugs are being printed and circulated this year.

And the return to Jobbers and Dealers everywhere is more good hard cash than has ever before been possible in spark plug profits.

Champion Spark Plug Company Toledo, Ohio

Axle and bearings of a two-ton truck

Prices (F. O. B. Detroit) Chassis \$985. With cab and windshield, \$1025; Combination box, stake gate body, \$1475; Stake gate, \$1080; Express canopy, \$1095.



Certainty—that is what you want—a truck you can sell confidently to near neighbors. Millions of dollars' worth of truck business will be done in the next few months; you know it. But you are afraid of the "ought-to-be-good" unproved trucks that suddenly are being offered on every hand. You can't take chances. You have a local reputation to build up and maintain.

HERE is certainty for you—a truck that has PROVED its merits, its capacity, its durability, its economy. It is the Maxwell; a truck design throughout, not an adapted passenger chassis. It has ten feet length of loading space; trouble-proof, mud-proof transmission; and the famous time-tried Maxwell engine, the most efficient engine of its type in the world. It has proved itself, in the severest use, "the best truck for the worst roads" . . . Every one of them you sell will enhance your local reputation. . . . Enormous production is fast being overtaken now by enormous orders. . . . Wire us today for our offer to dealers.



Maxwell Motor Sales Corporation

Detroit, Michigan

Mention "Motor West." Please, When Writing to the Advertiser

\$1250**120-Inch Wheelbase
40-Horsepower Motor****Mitchell**
Sixes**\$1525****127-Inch Wheelbase
48-Horsepower Motor**

Those Legions of \$1250 Buyers

What Car Will They Choose This Year?

TENS of thousands of fine-car buyers will this year seek a \$1250 price. And you can convince yourself, if you will, that the Mitchell Light Six will come first with them.

It has a 120-inch wheelbase — a 40-horsepower motor.

It has all the Mitchell over-strength, its sturdiness, its endurance.

It has the Mitchell extra features, like a power tire pump, a dashboard engine primer, reversible headlights, shock-absorbing springs.

It has the Mitchell luxury and beauty which cannot be matched in this class.

Those fine-car buyers want these things, despite the modest price. They want room and power, beauty and equipment. They want performance and endurance. And they want a Six.

Those who see this car, or who read our ads, will want

this Mitchell Light Six. It marks the supreme value in the \$1250 class.

This shows the result of our factory efficiency which we have spent years in developing. It shows what we do by building complete cars — chassis and bodies — under expert factory methods.

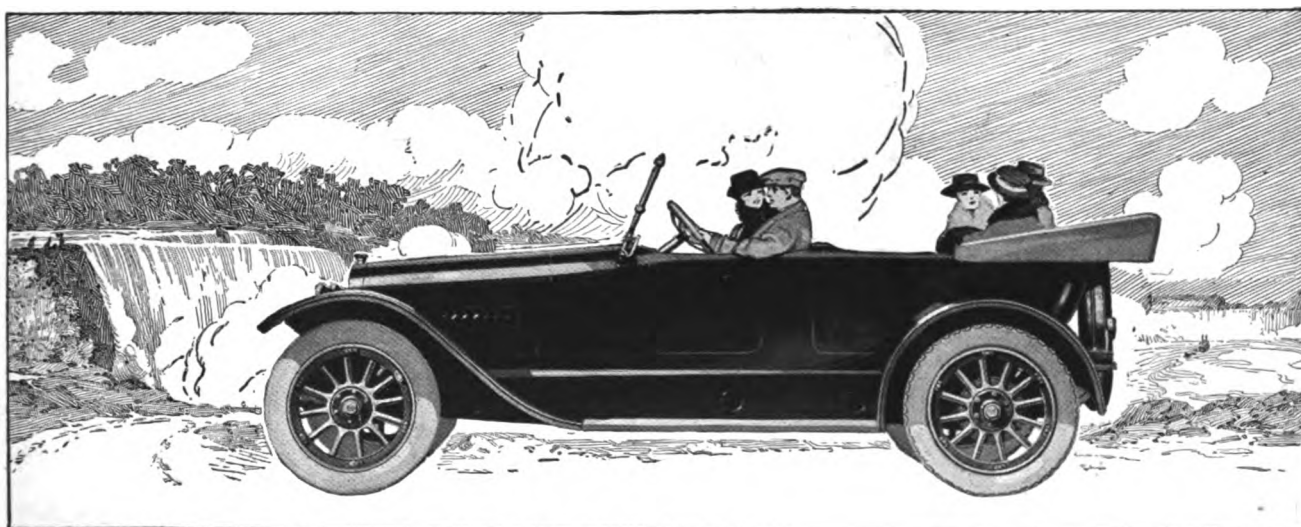
Cost has been minimized, waste is eliminated. Production has been doubled without any large additions. We operate our own body plant.

The value we give in this car for \$1250 shows what those savings mean.

**120-Inch Wheelbase
40-Horsepower Motor
Power Tire Pump
Shock-Absorbing Springs
Dashboard Engine Primer
Reversible Headlights
Big Margins of Safety
Unusual Luxury**

The new Mitchell line offers 19 new-style bodies. The Mitchell Light Six comes in four styles. No other one line combines so many attractions. Please investigate.

Send for latest catalog to Mitchell Motors Co., Inc., Racine, Wis.



Now a Brunswick Tire

*Built to Brunswick Standards
Backed by Brunswick Prestige*

THE world-famed House of Brunswick is now building automobile tires and tubes. Building them as every Brunswick product for 73 years has been built to a super-standard—to command supremacy.

In the past two years we have built and equipped a model tire making plant. Every machine is the latest — every method and process the best that's known.

We have organized a remarkable corps of tire experts. Each has been chosen for exceptional knowledge of skill. Coming from numerous great factories, this staff combines all the latest ideas in tire making.

Many months were devoted to technical study of other tires and tubes. Every formula, every process, every standard was compared — both in tires and tubes. All fabrics and treads and constructions were put to comparative tests. We know every tire maker's advantage. And we know their shortcomings, their evasions, their economies.

Then in Brunswick Tires — in every detail—we adopted the maximum standard.

That's all there is to a super-tire — simply a super-standard. There are countless ways to skimp — countless possible deceptions. High ideals are essential to good tires.

The Brunswick record — for 73 years — proves that those ideals exist here. There was never a Brunswick product which did not stand supreme. Men will expect that same supremacy in Brunswick Tires and Tubes. And we pledge you they will find it.

The Brunswick-Balke-Collender Co.
General Offices: 623-633 S. Wabash Ave., Chicago

*Branches in the Principal Cities of
United States and Canada*

Brunswick TIRES



To Dealers:

Brunswick Tires and Tubes — while new — have an ancient prestige and a world-wide fame behind them. Also vast responsibility. Our branches everywhere — already established — afford quick and economical distribution.

Overhead expense and selling expense are minimized by our established organization. That enables extra values — extra standards — in Brunswick Tires and Tubes.

Wide advertising will bring to Brunswick Tires instant recognition. And experience will shortly give them a distinctive place. Write us now for our dealer propositions. See what this line offers.

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A FRAME that cannot break or shear out of square

Also 4 other big NEW talking points, which enable Armleder Dealers to "drown out" all competitive arguments, and make quick, easy sales—sales that do not involve the giving of expensive future "SERVICE" that eats up profits.

Note these other great Armleder improvements:—

WHEELS that are too strong to break down.

RADIATOR that never leaks or wears out.

RADIUS RODS that prevent universal joint trouble.

SPRINGS, Armleder Patented, guaranteed not to break.

ARMLEDER

Motor Truck

2 Ton—WORM DRIVE—3½ Ton

Sell a motor truck backed by a House of NATIONALLY known financial responsibility—in business to STAY. Armleder Dealers are building up a permanent, profitable, ever-increasing business.

Do you want this profitable Armleder Agency?

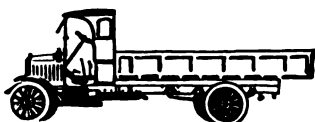
Answer at once.

ARTHUR H. HERTZ

112 MARKET ST., DEPT C, SAN FRANCISCO.

In Charge of Western Sales
ARMLEDER MOTOR TRUCKS.

Manufactured by
THE O. ARMLEDER CO.
Cincinnati, O.



"QUALITY FIRST" is ever the uppermost thought in the production of

CENTURY-PLAINFIELD TIRES

and governs every step of procedure from the purchase of the raw materials to the final inspection.

OVER SIZE HAND MADE

The result is tires of such super-excellence that they last longer and give much greater satisfaction than those made to sell on price.

EXCLUSIVE TERRITORIAL ARRANGEMENTS, for high-class dealers, permit them to build successful and permanent business.

TERRITORIAL DISTRIBUTORS:

Baker, Hamilton & Pacific Co., J. B. Wood Tire Co.,
San Francisco 927 S. Hill St., Los Angeles
B. M. Wade & Co., Portland and Spokane.

San Francisco Service Store: Hoelle-Rubber Sales Co.
Branch and Warehouse: 430 Golden Gate Avenue, San Francisco.

Century PLAINFIELD Tire Co.

PLAINFIELD, N. J.

"A subsidiary of the Rubber Insulated Metals Corporation, exclusive manufacturers of the BIMCO Rubber Products by the ELCHEMO process."

FACTORIES, PLAINFIELD, N. J.

McGRAW PRODUCTS

Pneumatic Tires • Motor Truck Tires • Inner Tubes



Confidence

THE confidence of jobbers, dealers and users of McGraw products is a logical outgrowth of their experience with the tires themselves and the progressive policies of the company behind them.

McGraw, Imperial, Pullman and Congress Tires are made in one of the largest tire factories in America. Large output combined with efficient manufacturing methods and an ideal system of distribution make it possible to produce these tires in a superior quality and still market them at a reasonable price.

The McGraw policy of sales and helpful co-operation enables the distributor to develop a permanent, growing business and affords him a satisfactory profit. Write *today* for details of our sales plan.



THE McGRAW TIRE & RUBBER CO.

East Palestine, Ohio

Distributing Warehouses • New York • Boston • Atlanta • St. Louis • San Francisco

MOTOR West

THE MOTORING AUTHORITY OF THE PACIFIC COAST

VOL. XXVIII., No. 10

MARCH 1, 1918

\$2.00 PER YEAR

REPUBLIC HEADS OPEN P. C. BRANCH

**President Ruggles and Other Officials
From Alma Factory Visit Los Angeles to Take Part in Ceremony.**

The Republic Motor Truck Co. branch for the Pacific Coast was opened recently in Los Angeles, Cal., during the visit to Los Angeles of F. W. Ruggles, president; M. A. Holmes, vice-president and sales manager; George Moore, treasurer; and W. A. Pritchard, of Critchfield & Co. A convention of Republic truck dealers was held in conjunction with an official inspection of the new plant, which will be managed by Lester A. Poyer. The Republic executives will attend other dealer conventions at San Francisco, Portland, Seattle, Tacoma and Salt Lake City.

Republic Truck Co. of Cal. Formed.

The Republic Motor Truck Co. of California has been incorporated in Los Angeles, Cal., with a capital stock of \$250,000, of which \$500 was already subscribed. The incorporators are George W. Moore, treasurer of the Republic Motor Truck Co., Alma, Mich.; D. F. Poyer, Republic truck dealer in Los Angeles; Spencer Thorpe, James E. Mahon and S. H. Pardue.

227,061 Cars Registered February 19.

Automobile registrations in California on Feb. 19 amounted to 227,061 since the first of the year. Receipts for the same period were \$2,333,198, embracing fees collected on licenses for motor cars and trucks, motorcycles, chauffeurs and automobile and motorcycle dealers.

San Diego Dealers Combine.

The Motor Car Dealers' Association of San Diego has been formed by the dealers in that city. E. P. Sample was elected president and legal advisor of the association.

Kleiber Building One Truck a Day.

Kleiber & Co., of San Francisco, Cal., are now producing Kleiber trucks at the rate of one a day, according to A. S. Hammersmith, sales manager of the company. The large factory recently occupied has already proved too small and a new addition, which will almost double the present working space, is being built.

Ahlberg Co. President on Coast.

C. J. Bender, president of the Ahlberg Bearing Co., is visiting the Pacific Coast territory of his company. He is accompanied by Mrs. Bender, and will spend approximately 60 days in this section and in the Hawaiian Islands, where he will appoint district representatives. Mr. Bender spent some time at the San Francisco show, and was much impressed by the spirit of big business which was everywhere prevalent.

Williams to Manage Kissel Sales.

Clifford A. Williams, formerly advertising manager of the San Diego Exposition and later head of the General Advertising and Sales Corporation, of Los Angeles and San Francisco, has been appointed general sales manager of the Kissel Motor Car Co., of Hartford, Wis.

Heads Olympian and Lexington Sales.

Bringing another adjunct to increase the success of the Olympian car in the San Francisco territory, Ray Holloway has been appointed sales manager of the California Motor Sales Co., Olympian and Lexington distributor in that city. Holloway has a pioneer's acquaintance with the motor car industry around San Francisco, having been connected with it as far back as 1902.

General Motors Branch in S. F.

The General Motor Sales Co., Pontiac, Mich., has opened a factory branch at 78 Eighth St., San Francisco. F. C. De Lappe has been placed in charge.

CALIFORNIA TOOK 4,810 CARS IN JAN.

**All Were New Cars and Trucks, and
Daily Increase Augurs Well for Big
Year's Business.**

California citizens purchased 4,810 new motor cars and trucks during the month of January, is one of the deductions drawn from figures recently made public by the state motor vehicle department, displaying a steady increase that augurs well for the balance of the year. Figures for the total registrations up to Feb. 12 show that 204,621 cars have been tagged. On the same date there had been 1,429 motor vehicle dealers licensed in the state. Total receipts amounted to \$2,097,972. The eleven counties forming Southern California took 2,415 cars and trucks and the Northern California territory absorbed 2,395 motor vehicles.

Field Vice-President Renstrom Co.

L. M. Field, sales manager of the Frank O. Renstrom Co., has just been elected vice-president of the company. Acting in his new capacity, Mr. Field will continue as sales manager to supervise the sales of all the Renstrom branches in the West.

Field's early experience has been in the East, where he was identified with the business from the factory standpoint, has proved of advantage and enabled him to successfully expand the Renstrom organization through the appointment of various dealers throughout California and sister states. During the last three years more than four-score dealers have been thus added to the Renstrom force.

In his recent visit to New York with Mr. Renstrom, Field was successful in hurrying western shipments of Grant Six and Premier motor cars and Bethlehem trucks.

SAVAGE TIRE CO. BOOSTS OUTPUT

**Tube Department Will Soon Turn Out
3,000 Tubes Daily—More Men to Be
Employed.**

The Savage Tire Co. has decided to increase materially the size of the tube department in its plant at San Diego. The work of this department will be expanded at once, and if present plans be realized, the capacity of the department will be increased to three thousand tubes per day before the end of the year.

According to a high official of the Savage Company, it will be an easy matter to find a market for all of the Grafite tubes that can be manufactured. Notwithstanding the fact that, heretofore, very little sales effort has been put forth in marketing tubes, the demand has steadily increased. This is undoubtedly due to the graphite coating on the Savage tube, which is a unique feature not possessed by any other inner tube manufactured. The process of coating the tube with graphite is covered by basic patents that are owned by the Savage Tire Co. Some features of the process are secret and the tube department at the Savage plant is closed to the public.

It is said that the Savage tube possesses the best features of other good inner tubes in addition to its graphite coating, which renders it impossible for it to stick to the inside of the casing in which it is used. No soapstone or tire powder need be used with the Savage tube.

The increase of production at the Savage plant will be gratifying to everyone on the Coast. It means more employment for skilled labor, hence more Coast prosperity. In view of the many recent transportation embargoes, the success of Savage products, manufactured as they are right here on the Coast, is of special interest to Coast car owners.

Changes in McGraw Coast Personnel.

The McGraw Tire & Rubber Co. has announced the appointment of R. G. Nelson as Pacific Coast district manager. W. E. Palmer has been promoted to manager of the Service Department, succeeding J. E. O'Hara, resigned.

Northwest Co. Adds Bethlehem.

The Bethlehem truck has been added by the Northwest Auto Co., of Portland, Ore., to its line of Reo, Indiana. Stewart and Duplex trucks and Ames worm-driven Ford attachments.

Leach-Frawley Adds King.

Formal announcement has been made by J. W. Frawley, head of the Leach-Frawley Co., of San Francisco, of the taking over of the King car agency for the Northern California and Nevada sales field. The appointment has really been in effect for some time, dating from the departure of R. R. Richardson, former King agent, for the East to resume his successful career in the business of merchandising bank safes. The King factory will continue its advantageous system of maintaining a large stock of King parts in its San Francisco branch for the Pacific Coast. Frawley will sell the King in conjunction with Dort and Liberty cars, a line almost identical with that handled for the southern part of the state by the affiliated concern of Leach Motor Car Co., Los Angeles.

Wallingford Takes Briscoe in North.

W. H. Wallingford, of Portland, Ore., has taken the Briscoe car agency for the state of Oregon and the Washington counties abutting on the Columbia River. The deal was made through the efforts of Don Peake, Pacific Coast representative for the Briscoe factory, and represents one of the culminating steps in the recent complete reorganization of Briscoe distribution throughout the Pacific Coast territory.

Doane Heads N. W. Olympian Branch

Practically completing the process, which has been under way since last fall, of placing the Olympian car upon an intensive distribution basis among the larger cities of the Pacific Coast territory, W. B. Doane has taken the Olympian line for Oregon and Washington. The new agency has been opened as the Northwest branch of the California Motor Sales Co., which during the past six months has entrenched the Olympian firmly throughout California. Doane will act as manager of the Portland branch and also of a sub-branch to be shortly opened in Seattle, Wash.

Studebakers Sell Around Tacoma.

Attesting the uniform success of automobile dealers in the Pacific Northwest, the Little & Kennedy Co., of Tacoma, Wash., recently announced that during 1917 they sold a total of 225 Studebaker cars in their Pierce county territory.

Stewart Truck for Inland Empire.

The Stewart truck agency has been taken for the eastern Washington region by the Snyder Motor Car Co., of Spokane, Wash. The Stewart trucks are built in capacity sizes ranging from three quarters of a ton to two tons.

Handle Gramm-Bernsteins in So. Cal.

The Smith Form-a-Truck Sales Co., 200 West Pico street, has been appointed Southern California distributors of the Gramm-Bernstein motor trucks, formerly handled in the same territory by F. M. Sinsabaugh, deceased. W. O. Gates and Leo Kelly are at the head of the Smith Form-a-Truck Sales Co., and with their knowledge of motor trucking conditions and the proved efficiency of the Gramm-Bernstein, expect to make that truck a powerful factor in delivery and transportation work in the Southwest.

Smith With McCracken Truck Dept.

C. H. Smith, for several years with the Moreland factory in Los Angeles, has entered the truck department of the McCracken Motor Car Co., of Portland. He will devote his attention particularly to pushing the Moreland distillate burning truck in the Oregon and Washington territory.

Oregon Chandler Changes Hands.

E. W. A. Peake, a well known Portland capitalist who has been interested in the automobile business for several years, has bought out the interests of Arthur H. Knaus in the Twin States Automobile Co. of Portland, Chandler Six distributors in Oregon and Southwestern Washington. Knaus has built up a very fine business with the Chandler since he took over the Chandler agency from E. E. Gerlinger last July. Peake will probably assume active management of the Twin States Automobile Co.

Peake is also interested in the newly formed Sharp Motor Car Co. of Portland, and of which John N. Sharp is president. The Sharp Motor Car Co. handles the Metz in the Oregon territory and has also been made distributor, both wholesale and retail, for the Saxon Six in Oregon and Washington.

Editor Root Visits Southland.

Charles P. Root, automobile editor of the Chicago Examiner and former editor of Motor Age, is spending a well-earned vacation at his San Gabriel ranch. Mr. Root will return home via San Francisco, and will devote some time to a study of California highway conditions.

Spokane Eldridge Has Night School.

The Spokane, Wash., branch of the Eldridge Buick Co. is conducting a night school for mechanics at regular intervals, under the direction of J. E. Swartz, service manager. Members of the mechanical force gather to study ways and means of increasing efficiency.

Butler-Veitch Incorporate for \$900,000

The Butler-Veitch Co., of Berkeley and Oakland, Cal., recently filed incorporation papers calling for a \$900,000 automobile company, which proposes to manufacture motor cars and trucks, motor car engines, airplanes and parts and several lines of accessories. The incorporators are C. L. Butler and Lloyd Veitch, who as partners recently took the Fageol truck agency for Northern California, H. D. Hadenfeldt, T. L. Baumgarten and Roy A. Bronson.

Ore. Counties Take Duplex Trucks.

The Northwest Auto Co., at Portland, Ore., is having great success with the Duplex 4-wheel drive truck. Three of these trucks were sold in February to three Oregon counties, Polk, Tillamook and Curry, for heavy-duty road work. Shortly before, Skamania county in Washington also bought a Duplex for road work. The three trucks sold to Oregon counties are to be driveaway deliveries. The trucks to Tillamook and Curry counties must be driven over roads through the Coast Range mountains that are considered impassable in winter. The driveaway to Curry county will be a particularly severe test, for in addition to the drive over the mountains, the truck will have to travel en route through Pass Creek canyon on the Pacific Highway in Douglas county, Ore., which has been closed since the fall rains. To reach Curry county, it will be necessary to drive to Grants Pass, Ore., thence over the mountains to Crescent City, Cal., a drive of between 400 and 500 miles.

Renstrom Takes on the Premier.

Reinforcing its already strong line—Grant Six cars and Bethlehem trucks—the Frank O. Renstrom Co., of San Francisco, has taken on the Premier, formerly handled by J. W. Leavitt & Co. The Renstrom Co.'s territory for these cars consists of Northern California and the state of Nevada.

Coast Service for Flechter Carburetor.

L. V. Flechter & Co., manufacturer of the Fletcher carburetor, have appointed the Neptune Motor Co., of Portland, Ore., and Los Angeles, Cal., to give service for Flechter carburetors in the Pacific Coast territory.

Westinghouse Service in Hawaii.

The Electric Equipment Co., representative on the Pacific Coast for the Westinghouse Electric Mfg. Co., has extended the distribution of Westinghouse automobile electric equipment to the Hawaiian Islands with the appointment of Smoot & Steinhauser as service representatives in the mid-Pacific territory.

Barnett Heads Graham on Coast.

As a preliminary step to pave the way for the distribution of their product on the Pacific Coast, the Graham Brothers Co., of Evansville, Ind., has appointed Clifford L. Barnett business manager for Pacific Coast and intermountain territory. Barnett is well known in San Francisco and Los Angeles as head of the Barnett Auto Body Co., which has ten branches on the Coast. Graham Bros. are manufacturers of a completely equipped truck attachment which includes cab top and express or stake type of body.

Seattle Firm Takes Bethlehem.

The United Motors Co., of Seattle, Wash., has taken the Bethlehem truck agency for Washington, Oregon and Idaho. The appointment was made by Fred W. Vogler, of the Northwest Auto Co., Portland, Ore., distributor of Bethlehems for the Pacific Northwest region.

Changes Among P. C. Willard Heads.

Widespread changes in the Pacific Coast organization of the Willard Storage Battery Co. have been announced to take effect March 1. Charles S. Harper, Pacific Coast district manager for the last four years, has purchased the Willard factory branch in Seattle, Wash., and will operate it as Charles S. Harper, Inc. He has the distinction of having opened the first Willard service station on the Pacific Coast in 1912 and has been directly connected with the Willard factory for six years. His successor as district manager will be R. C. Bridges. Southern California district representative. S. W. Rolph, assistant district manager, will be transferred to the sales promotion department of the Willard factory. In the San Francisco territory F. L. Jepson, San Francisco city service manager, will succeed Rolph under the title of district sales manager. C. H. Starr, manager of the Seattle branch, will succeed Jepson.

Lancaster Tire Branch in Seattle.

A factory branch for the distribution of Lancaster Wiregrip tires has been opened in Seattle, Wash., following the opening of similar branches in San Francisco, Portland and Los Angeles. E. K. Allen, head of the Allen Tire & Rubber Co., has been made district manager.

Service Truck for Northern Calif.

The Peacock Auto Co., of Oakland, Cal., has taken the agency for the Service truck line, with Northern California as selling territory. Service trucks are built in six models with five chassis sizes by the Service Motor Truck Co., of Wabash, Ind.

BIG BUSINESS AT PORTLAND'S SHOW**Manager Prepares Statement Showing That \$608,611 in Cars, Trucks and Tractors Disposed Of.**

The Portland, Ore., automobile show which closed Feb. 13 resulted in a total of \$608,611 worth of cars, trucks and tractors being sold during the show, according to the official estimate of M. O. Wilkins, manager of the show. Compared with these figures, the 1917 show sales were not over \$250,000. Total attendance at the 1918 show was 16,400, of which 12,000 was in paid admissions. The attendance at the 1917 exhibition was estimated at the time as being between 8,000 and 9,000.

Delion Tires in Northern California.

The Pacific Pipe & Supply Co. is one of the newest tire distributors in San Francisco, where it has opened a store for the distribution of Delion tires and Palmer inner tubes. The Los Angeles office of the company has acted as distributor of Palmer tubes for some time.

Williams, of Lancaster Tire, Here.

Orr H. Williams, treasurer and general manager of the Lancaster Tire & Rubber Co., was a recent visitor to the Pacific Coast, for the purpose of arranging the establishment of a direct factory branch for the Pacific Coast region.

Saxon Agent for Northwest.

The Saxon agency for the two Pacific Northwest states has been linked to the distribution of the chain-driven Metz car by John D. Sharp, of the Sharp Motor Car Co., of Portland, Ore. W. S. Barnes has been made sales manager for the Saxon, while H. M. Princehouse will direct the Metz end of Sharp's business.

Morris General Manager Savage Tire.

Raymond V. Morris was appointed general manager of the Savage Tire Co. and the Savage Tire Corporation at the annual meeting of the directors of these companies, which was held recently in San Diego. As the title assigned to Mr. Morris indicates, he is to have complete charge of all of the activities of the Savage Companies. Mr. Morris is nationally known through his former connection with the Curtiss Aeroplane Co. He possesses in a marked degree the ability and energy necessary for the successful performance of the high duties of his new office.

HARRISON SELLS \$1,250,000 IN CARS

San Francisco Dealer Has Banner Year, Selling 3,063 Passenger Cars and 599 Motor Trucks.

One and a quarter million dollars' worth of business was handled during 1917 by the Harrison Motor Car Co. and the H. O. Harrison Co., both of San Francisco and both organized and headed by H. O. Harrison. Peerless cars and trucks, Republic trucks and more recently Columbia cars are handled for the Northern California region by the Harrison Motor Co., while the H. O. Harrison Co. is Northern California dealer for Hudson and Dodge cars. During 1917 the two affiliated companies retailed and wholesaled a total of 3,063 passenger cars and 599 motor trucks. Especially notable has been the prosperity of the former company, which was formed in February, 1917, when its sales amounted to \$17,000. By April they had expanded to \$115,000 and recently, during January and February, 1918, they have remained around this mark despite the unfavorable turn of industrial conditions due to the war. Harrison has 204 persons in his employ and his pay roll averages \$19,000 a month.

New So. Cal. Maxwell Representative.

Representing probably the most important automobile dealer appointment made in Southern California since the opening of the present year, the Southwest Motors Co., of Los Angeles, has been made Southern California distributor for Maxwell cars and trucks. The announcement was made by W. J. LaCasse, directing Maxwell distribution in the West, following the arrival on the Coast of C. E. Stebbins, assistant director of sales at the Maxwell factory. The Southwest Motors Co. was formed in Los Angeles last fall and has acted as distributor of Columbia cars. Ample finances back of the new company combined with the aggressive and successful sales policies of the Maxwell factory assure the success of the new Southern California distributor.

Internat'l Sales Takes Vulcanizers.

The International Sales Co., Los Angeles, distributors of Gates Half-Sole tires on the Pacific Coast, has closed a contract with the Wilkinson Mfg. Co., of San Bernardino, Cal., to take over the entire factory output of Wilkinson vulcanizers, tread molds and other vulcanizing accessories.

Spokane Houses Training Employees.

To all outward appearances the automobile row in Spokane, Wash., is closed after 6 p.m., but nearly every house has a night school all its own during the week or a service meeting of all employees or an educational gathering of some sort. The war is taking men in large numbers from the shops and garages here and local automobile men are meeting this contingency by taking the inexperienced and training them. The lessons in automobile salesmanship and mechanics will go on for a number of weeks yet and are to be without tuition fee.

Murphy Selling Norwalk Tires.

Tom C. Murphy, former "judge" of the Los Angeles Sunrise Court and grandson of the great Francis Murphy, famous apostle of temperance, has become a tire salesman. He has become associated with the Lichtenberger-Ferguson Co., factory distributors of Norwalk tires on the Pacific Coast. He will confine his efforts to promotion work in Los Angeles and expects to make a big sales record during 1918. His headquarters will be at the local Norwalk service station at Pico and Hope Streets.

Mr. Murphy decided some time ago to become a tire salesman and before accepting his present position investigated the reputation of every well-known tire, becoming convinced, as he states, that the Norwalk line offered the best opportunity. He was formerly a sociological and research worker and has a fine understanding of human nature.

S. F. Ahlberg Mgr. Joins Navy.

Donald M. Johnson, manager of the San Francisco branch of the Ahlberg Bearing Co., has joined the United States navy and has gone to San Pedro, Cal. Succeeding him, Fred West, of the Ahlberg branch in Los Angeles, will take temporary charge.

Bennett, of Vincent Wheel, a Visitor.

W. C. Bennett, district manager for the Vincent Clear Room Steering Wheel Co., will make an extensive tour of the Pacific Coast, following the appointment of the Chanslor & Lyon Co. to handle the company's product on the Coast.

Add Scripps-Booth in Tacoma.

The W. S. Dulmage Motor Co., of Tacoma, Wash., has added the Scripps-Booth agency to the sale of Chevrolet cars.

Heads Seattle Eldridge Sales.

I. S. Crocker, Seattle, Wash., has been made sales manager of the Eldridge Buick Co.

LITTLE COMFORTS AID MOTOR TRAVEL

How Famous Portland Caravansary Helps Tourists and Gets O. K. of Automobile and Road Associations.

The management of the famous Multnomah Hotel at Portland, Ore., has established a thoroughly equipped garage for the exclusive use of guests of the hotel. Manager H. H. Cloutier rented all the space of a three-story building just a few steps from the hotel, had it rearranged, and is now ready to stable as many as 25 touring cars each night. Garage employees call for the cars at the hotel as soon as the traveling party arrives at the front door, asks the chauffeur for instructions concerning washing, oils, gas or repairs and then wheels away to the storage shop. In the morning he again appears with the car ready for the road.

No charge is made by the hotel or the garage for calling for the car on arrival at the Multnomah, nor is a delivery charge made against the guest.

The Multnomah also maintains a responsible information bureau, with Mark Woodruff in charge. Mr. Woodruff has probably written more of Oregon and Washington scenic attractions than any other citizen, and was for years connected with the Portland Chamber of Commerce. As a result of its modern methods of treating motor travelers, the Multnomah has received the endorsement of the Western Washington Auto Club, and that of the Oregon Motor Association.

Fulton Enjoys Pacific Coast Demand.

The Pacific Coast territory is absorbing a respectable quota of the production of Fulton trucks, manufactured by the Fulton Motor Truck Co., of Farmingdale, Long Island. Recently the Runnels Motor Sales Co., San Francisco, Cal., distributors for the company, wired for an additional car load of Fultons, making two car loads in transit.

Seattle Sub-Dealer for Shipyards.

Believing that propinquity to the shipyards on the Seattle, Wash., waterfront will demonstrate that the hundreds of well-paid workers will prove a good field for motor cars, the Kline & Winningham Co. has been opened in that city at 719 Railroad Ave. As sub-dealer for the Seattle Automobile Co. the new firm will handle Maxwell cars and trucks and Chandler cars.

Second Pacific Show Pronounced Success

Despite Bad Weather and War Conditions, San Francisco Dealers' Big Exhibition Far Out-classes Last Year's Effort—More Exhibitors and Better Attendance, While Amount of Business Done Was Extraordinary—Will Continue Agitation for Third National Show

SAN FRANCISCO'S Second Annual Automobile Show, under the auspices of the local Dealers' Association, upheld the traditions of the Pacific Coast metropolis, and once again emphasized the fact that the claims of the Bay City to the honor of having its annual motor exhibition ranked with the national affairs in New York and Chicago are amply justified.

The show just closed, after a ten-days' run, lacked nothing that goes to make an exhibition of sufficient magnitude to warrant the appellation "national." The attendance was excellent—upwards of 125,000—and this despite the war-time spirit of economy everywhere prevalent. This immense outpouring of the motor-wise is an evidence that the Pacific Coast, while "doing its bit" with the rest of the country, realizes that the passenger car and the motor truck are absolute necessities in that speeding up of business and that conservation of man-power which must be constantly maintained if the war is to be won.

Business was the rallying cry everywhere throughout the show. While the decorations were superb—admittedly superior to anything the National shows could boast—and the music of the best, it was the business results of the show which constitute its greatest claims to the attention of the industry's captains, many of whom were present either in person or were represented by prominent department heads. Sales were numerous every day, and the sum total, when finally reckoned, promises to be something of a surprise to those pessimists who seem to take a doleful delight in predicting the utter collapse of the nation's third greatest industry.

Nor was this activity confined to the passenger car section. In the commercial car department, which was located in the basement of the huge new Auditorium, practically every exhibitor, at the completion of the ten-day run, could point to a surprisingly large amount of business done—not alone in actual direct sales, but in the appointment of agents and sub-agents throughout the immense territory of which San Francisco is the distribution point.

In the accessories section, which constituted the greatest aggregation of motor needfuls ever seen on the Pacific Coast, and which entirely filled the huge corridors surrounding the main hall balconies on all four sides, satisfaction with the results of the show in a business way was everywhere apparent. Sheafs of orders were in evidence at practically every booth, and it was apparent that dealers and owners alike had taken advantage of the reduced railroad rates from every corner of the territory to come to San Francisco to make their arrangements for the coming twelvemonth.

It was this feature—the tacit acceptance of tradesman and owner alike from every section of Northern California and Nevada of the idea that the San Francisco show is the annual clearing-house for the making of new connections and the severing of old ones; the one yearly op-

portunity for laying in stocks to the best advantage; the logical time when one may expect to meet the people he wants to meet—that constitutes the San Francisco show's most potential claim to greatness. It was the annual round-up of the motor-wise of an empire!

That the start of the show happened to synchronize with the opening of the Pacific Coast rainy season was perhaps unfortunate, but the management are wondering what the results would have been had the delightful weather of the previous nine months obtained during the ten days of the show. There may have been some truth in the statement that the moist weather had a tendency to keep all hands indoors and make them attend to business whether they wanted to or not; for in fine weather there are numerous attractions—and distractions—to be found in and around San Francisco. But Manager George Wahlgreen made the statement that with clear weather the attendance would have been close to 175,000, the rain keeping many away who would have otherwise visited the show several times instead of once.

Motor Truck Exhibit Under Same Roof.

When the committee began preparing its plans for the present show there was quite a diversity of opinion regarding the advisability of having an exhibition of motor trucks in connection with the passenger car display, and if so whether to house the exhibits in a tent on a lot in close proximity to the Auditorium or in the basement of the big building.

First it was decided to have the motor truck show during the same week as the passenger car display, and then after much discussion pro and con it was agreed to use the basement, although the amount of space available was much short of the demand from prospective exhibitors, and much broken up by pillars and other supports of the upper floors.

It so happened that the sponsors of the show guessed right, for the rain-maker was on the job in earnest, especially during the early part of the week. Had the truck show been installed in a tent outside the Auditorium it would have been a very damp and dismal affair. As it was, the commercial cars were under the same roof with the passenger cars and the accessories, and were inspected by thousands, with the resulting business decidedly gratifying to all the exhibitors. The twenty-six firms displaying trucks had on exhibition no fewer than eighty-five vehicles of various capacities, and this section of the show was declared to be the most comprehensive line-up of commercial cars ever witnessed on the Pacific Coast. Quite a number of firms who were unable to secure desirable space in the Auditorium basement held individual shows at their various salesrooms, and the number of motor truck sales recorded during the week established a record, according to the estimates of prominent San Francisco dealers.

That the 1918 exhibition was far more comprehensive



than the affair of the previous year was manifest to even the most unobservant. Not only were the corridors outside the main exhibition hall utilized this year, but fourteen more makes of passenger cars were represented than were displayed in 1917. Last year's show had no motor truck section; this year there were twenty-six firms exhibiting the latest models of commercial cars. The list of twenty-nine exhibitors in the 1917 show had grown to fifty-two in the present exhibition. Indeed, the extent and variety of the displays bore out the claim of the promoters that the San Francisco show is worthy of recognition as the third national show, and it is understood that the Motor Car Dealers' Association of San Francisco will continue their efforts to have the National Automobile Chamber of

Commerce put the Pacific Automobile Show on the same plane as the annual affairs in New York and Chicago.

Want Next Year's Affair National Show.

An automobile show must be judged by its after-effects as well as the success that it enjoys in its duration, but the Pacific Automobile Show has already proven itself a duplicate of its predecessor of 1917, a huge success and the largest exposition of motor vehicles held west of Chicago. It really marks the opening of the year for the Northern California dealers who henceforth cannot permit any slackening in their activities if they are to benefit from the greatly increased volume of sales that follows in the wake of the annual automobile show.



The contention of San Francisco and California in general that the Pacific Automobile Show should be recognized by the automobile industry of the country as a third national show that will be representative of all motoring activities west of the Rockies has been further strengthened by this year's exposition. Official indorsement from the National Automobile Chamber of Commerce has yet to be given, but hundreds of Pacific Coast automobile dealers and devotees journeyed to San Francisco, where they met factory heads or their Coast representatives and the large Coast distributors and arranged plans for the dealer's next fiscal year, which may be said to begin in February, 1918, and close before the next show twelve months later.

The exhibitors were thoroughly satisfied with the amount of business done and with contemplation of the sudden increase in sales arising from their prospect lists after the show. The returns to the management secured from the paid attendance and the display space will offset by an ample margin the outlay for the costly decorations, the rental of the building and numerous other incidental expenses.

Rain Hurt Attendance; Helped Sales.

The ten-day show period coincided with the first real opening of the rainy season for the year. The rain at first slackened the volume of visitors but at the same time it stirred in the exhibitors sincere jubilation. Any slac'



HOWARD CO.'S BUICK DISPLAY WAS MOST COMPREHENSIVE. DON LEE'S EXHIBIT OCCUPIED ALL OF ONE CORRIDOR.

CHESTER WEAVER'S STUDEBAKER SHOW IN THE EAST HALL. H. L. ROSE-CHALMERS CLOSED-CAR DISPLAY ATTRACTIVE.

in automobile sales has been partly due to the drought conditions that threatened the farming and ranching sections, making ranchers afraid of investing any of their ready funds in automobiles. The final arrival of the belated precipitation will remove this uncertainty and the Northern California dealers anticipate a lively demand from all agricultural sections of the state.

An exceptionally large Sunday crowd filled the Auditorium on the last night of the show. While no official figures have been as yet issued by Manager George A. Wahlgreen, the actual attendance at the show during its ten day run is estimated at over 120,000.

Washington's Birthday, Feb. 22, was a notable day at the show. The large attendance of soldiers, which brought forcibly to mind the fact that today we are a nation at war, also was in a way symbolic of the close connection which has come to link the motor vehicle with war-time efficiency both at the front and at home.

The total value of the cars, trucks and accessories displayed was estimated at about \$2,000,000.

Details of Some of the Exhibits.

The Don Lee exhibit of Cadillac cars fully maintained the reputation of this pioneer among California dealers for distinctiveness in show displays. The entire corridor on the right of the main entrance was given over to the Don Lee exhibit, which consisted of nine cars and the usual educational cut-open chassis. Three of the cars were open types—the four-passenger phaeton, the standard

roadster and the seven-passenger touring car. The in-closed car display was composed of the convertible victoria, the standard limousine and the Imperial limousine types of the Cadillac line.

The Frank O. Renstrom Co., as an added emphasis to the merits claimed for the Grant car, conducted a moving picture exhibition of the arduous jaunt of the Grant Six car driven by Fred Conger last year through the high Sierra snows.

The Olympian and the Lexington, both handled in San Francisco, by the California Motor Sales Co., were the newest cars on display. Almost unknown in the West a year ago, the Olympian now has an active distribution up and down the Pacific Coast, with distributors in the five or six principal cities of the Coast region.

The Columbia car was another newcomer and aroused the attention which novelty combined with distinction obtains everywhere. The Columbia has been represented in the southern part of the state since last fall but entered the San Francisco region quite recently when the Harrison Motor Car Co. was appointed distributor.

The Chandler car exhibit, staged by the Peacock Motor Sales Co., local distributors, included nine cars. Most prominent of all was the Chandler sport model, which was making its introduction to the Pacific Coast. With electric blue finish, white wire wheels, black fenders, low-hung body, thirty-two inch wheels and a gear ratio which gives a direct-drive sped of 75 miles an hour this Chandler

model was one of the most attractive exhibits at the show. The Chandler de luxe four-passenger touring car, with a custom-built body from the Earl Automobile Works of Los Angeles, was another striking combination of power and luxury.

The Dodge line was comprehensively represented in the H. O. Harrison exhibit by four cars—a touring car, roadster, convertible sedan and coupe. The fact that eleven Dodges were sold during the show is conclusive evidence alike of the popularity of the exposition and of Dodge cars.

The Peerless section of the Harrison Motor Car Co. exhibit of the four-passenger car, the sporting roadster, the seven-passenger touring car and the sedan coupe.

Reminiscent of the spirit of Bob Burman and the fame of Louis Chevrolet, the "Buick Bug" racing car was one of the conspicuous features in the Buick booth, where it offset the polished refinement of its Buick successors by its own grim hardiness and the ancient Burman records, many of which stand unbroken to this day. The Buick display included eleven cars in all.

The Briscoe exhibit, staged by H. V. Carter, was notable for the double-control Briscoe car. The innovation is for the purpose of rendering safe and easy the instruction to a beginner how to run a car, any mistakes on his part being quickly remedied by the second steering wheel under the hands of the instructor.

The Studebaker exhibit delayed many visitors whose intentions were for a casual and hurried visit to each dis-

play. The three models comprising the series 19 line, are the most attractive cars ever produced from South Bend, Indiana. The exhibit included the big and little six and four-cylinder types.

Show Praised by Prominent Visitors.

O. H. McCornack, sales manager of the Hudson Motor Car Co., visited San Francisco for the show. The show was the object of strong praise from him and was, he declared, one of the finest displays of its kind he had seen anywhere in the country. The Auditorium itself particularly impressed him with its spaciousness and lack of pillars or posts to curtail the general view. Discussing automobile business conditions, McCornack said, "From present indications it seems that by July 1 all stocks of the most popular cars will have been exhausted and that from that time on dealers and buyers will have to depend upon limited production to meet their wants. The most serious condition from which there seems to be no escape is that resulting from freight embargoes. Embargoes are placed on shipments without notice and for an indefinite period. A dealer may feel that if he gives his factory instructions to ship him cars on some future definite date that his wants will be taken care of. But before the date of shipment the embargo may make it impossible. Whole sections involving as much territory as two or three states have been embargoed against automobile shipments for weeks at a time."

Frank J. Edwards, personal representative of George.



THE HAYNES EXHIBIT WAS VERY TASTEFULLY ARRANGED. PHILLIPS DISTRIBUTING CO. SHOWED THE DANIELS CAR.

AL FAULKNER'S MARMON EXHIBIT HAD A FINE SETTING. LOGAN-CADWALADER'S VELIE STAND WAS WELL LOCATED.

Kissel, president of the Kissel Motor Car Co., visited the show at the invitation of W. L. Hughson, president of the Pacific Kissel-Kar Branch. "After having visited the national shows in New York and Chicago, which were held in the midst of the most inclement and severe weather the East has ever witnessed," says Edwards, "it was a pleasure to visit and find such an unique and tastefully arranged exhibition of motor vehicles as the Pacific Automobile Show. It is regrettable that more floor space is not available, which makes your exhibition somewhat crowded. This is not criticism—rather, it shows the zealousness and activity of the dealers exhibiting. I can truthfully say that of all the numerous exhibitions I have visited the one being held here is the finest I have ever seen."

C. P. Henderson, vice-president and general manager of the Cole Motor Co. was one of the most prominent Eastern visitors. Horace De Lissier, one of the best known automobile men in the East and chairman of the executive board of the Ajax Tire Co., a director of the Briscoe Motor Corp. and also with the Racine Tire Co., was the guest of W. L. Hughson.

Among prominent visitors from the Eastern factories drawn Coastward by the show was C. F. Jamison, assistant general manager of the Elgin Motor Car Corp., Chicago, who while in San Francisco closed with M. M. Hartmann to handle the Elgin in Northern California during the 1918 and 1919 seasons.

W. A. Chapman, general manager of the Skelton interests, who are one of the largest merchandisers of motor cars in the United States and to which the Leach-Frawley Motor Car Co., of San Francisco, and the Leach Motor Car Co., of Los Angeles, belong, was a visitor.

W. S. Bowen, district sales manager of the Sterling Motor Truck Co., was a visitor.

C. W. Dansie, Western representative of the Winther Motor Truck Co., of Kenosha, Wis., did a lot of missionary work in connection with the exhibit of this firm in the Auditorium basement. He is rapidly making this truck a power to be reckoned with in his territory.

P. D. Chamberlain, factory representative of the McKee Glass Co., of Jeannette, Pa., was present during the show, making his headquarters at the booth of the company in the accessories section.

A. B. Holtham, secretary-treasurer of the Interlocking Auto Rim Co., Inc., 700 Commonwealth avenue, Detroit, attended the show in the interest of his company, which had a comprehensive exhibit of its device. This company has Pacific Coast headquarters at 405 Hobart Building, San Francisco.

Among the Accessories Exhibitors.

The advent into the San Francisco territory of L. Lawrence & Co., the world's largest cylinder repairing company, was an interesting feature of the show. This company, which has branches in many of the largest cities in the country, has just opened its San Francisco branch, under the name of The Lawrence Co. of San Francisco, at 116 Hyde street, corner of Golden Gate avenue. H. Z. Hoppe is in charge of the branch, and at the show made quite an impression with his lucid explanations of the methods of repairing scored and defective cylinders by the Lawrence patent process. J. K. Lawrence, of the parent house in Newark, N. J., is at present in San Francisco, and will visit all the principal cities in this territory before his turn East.

Ralph S. Longstaff, Pacific Coast distributor for the Mid-West Mfg. Co., of Sioux Falls, S. D., was on hand with the Red Devil Dolly Jack, a simple, reliable and rapid accessory for crowded garages and the wash-rack. This jack does away with the necessity of crawling under the car, and sets so firm and rigid on its base that it cannot tilt and drop the car during the process of raising or lowering it.

Clifford M. Putnam, in charge of the exhibit of the Presto-Cloth Mfg. Co., Inc., Toledo, O., made a convincing display of the merits of Presto-Cloth with the aid of a glass windshield and an improvised rain-storm.

F. R. Quigley and A. W. Parent, representing the Superior Tire & Repair Co., of 1650 Pine street, San Francisco, had a display which was a most potent argument for tire conservation. They showed how it is possible to rehabilitate a tire, especially any of the more expensive cord types, at nominal expense, and add from 33 1-3 to 50 per cent to its life. Their booth in the accessories section was constantly surrounded by a crowd of interested motorists.

Explaining the merits of the Aero Cushion Tire, J. J. O'Shannessy, general agent of the Aero Cushion Tire Co., of San Jose, Cal., proved to be a lecturer par excellence. He pictured the delights of a punctureless world to constant crowds of interested motor car owners and secured numerous orders for this Pacific Coast product.

Another silver-tongued orator in the accessories section was N. F. Andruss, who is credited with having put the Ambu product on the map in Northern California, with every nook and corner of which he is familiar. If actual recorded sales are a criterion, the show was well worth while from an Ambu standpoint.

Week's Activities Outside the Show.

The White Co., Pacific Coast branch, staged a private display of White trucks in six different sizes in its quarters near the Auditorium. The Butler-Veitch Co., distributors for the Fageol truck, also conducted a private display of Fageol trucks in its sales quarters near the show building. G M C trucks were shown by the General Motors Truck Co. in its warehouse in the Auditorium vicinity.

The L. H. Rose-Chalmers Co., Chalmers dealer for Northern California, held a dealer's convention during the show, which was attended by sixty dealers. The meeting radiated an especially strong optimism and an aggressive sales spirit for 1918.

The Haynes Auto Sales Co., local dealer, held a banquet for thirty Haynes dealers, gathered from all parts of California. The Haynes exhibit consisted of seven special show cars.

Fifty Paige dealers from all parts of Northern California were the guests of Harry Groff, factory representative for the Paige company.

The capable manner in which the tickets for every department of the big show were handled reflects great credit on Fred Cooch, who was imported from Los Angeles by Manager Wahlgreen for that special purpose. Fred has been in the show business so long that his knowledge of men and conditions, especially in Southern California, is likely to prove a valuable asset when he graduates into the managerial class himself.

Marysville, Cal.—The Benham Motor Sales Co. has taken the Bethlehem truck agency for Yuba and Sutter counties.



SOME OF THE ACCESSORY DISPLAYS—(Left to right) First row—Champion Spark Plug Co.; Lichtenberger-Ferguson, Norwalk Tires; McKee Glass Co. Second row—Double Seal Ring Co.; Everbright Mfg. Co.; Nu-Back Mfg. Co.; Leath-r-nu. Third row—Cushman Co., McNaull Tires; Lomax & Chapman, Rives Pedal Pads; Carboncide Mfg. Co. Fourth row—Double Seal Ring Co.'s Lecturers; Superior Tire & Repair Co. official explaining how a bad tire can be saved; Edstrom Removable Rim Co. Bottom row—Lomax & Chapman, Five-Star Lubricants; C. A. Bacon Co., Macbeth Lens; Scovel Iron Store Co., automobile fabrics and hardware.

Motor West

Los Angeles-San Francisco-Portland-Seattle

The Winning Authority of the Pacific Coast
Established 1917

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Representatives

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Notes

What the Motorist Must Know Before He Starts

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Tractor Field Open to Automobile Drivers

ONE OF THE STRANGEST things which have ever happened in the history of the automobile industry is the fact that a tractor field open to automobile drivers is now being held in the city of Los Angeles. The field is open to all drivers who are interested in the tractor and who are willing to pay the fee of \$1.00. The field is open to all drivers who are interested in the tractor and who are willing to pay the fee of \$1.00.

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It will also be available to all other departments of the Council of National Defense or of the War Department for any service it may be able to render, and will give to manufacturers of motor trucks all over the United States such assistance as they may call for.

Through its direct touch with the motor truck industry and with shippers all over the United States, the Motor Truck Committee should be in a position to lend signal aid.

Temporary headquarters have been taken in the Ouray Building, 8th and G Streets, N. W., Washington, D. C.

Automobile Industry Uses Little Coal

Although the automobile industry ranks near the top in magnitude among all the manufacturing industries of the nation, it is a very light user of coal. According to the report of the United States Bureau of Census for the year 1914, it ranked in forty-second place in tonnage of coal consumed. Less than half a million tons were used in automobile and motor truck plants in that year, while thirty-one other industries used more than 1,000,000 tons each, six used more than 2,000,000 and seven consumed more than 5,000,000 tons each. Steel works and rolling mills used more than 20,000,000 tons during that year, clay products companies more than 8,500,000, cement plants nearly 6,750,000 and paper and wood pulp mills more than 6,250,000 tons.

Motor Racing This Year Despite A. A. A.

Plans for an active season of motor racing during 1918 are well under way. The retirement of the American Automobile Association and the ban of that association on war-time contests has had no effect. When the American Speedways Association met in New York during the national automobile show, all information with regard to its deliberations was withheld, presumably until it had been ascertained whether the government would in any way take action against contests. It is now stated that the New York conferences resulted in a decision to promote speedway races during the year in Chicago, New York and Cincinnati. It has been known for some time that the Uniontown speedway and the new Philadelphia speedway, which will be completed, will both be active. It is presumed that this action of the speedways will be contingent on the securing of a sufficient entry list, but it is not believed that this will cause any trouble. In this connection it is interesting to note that the managers of Ascot Speedway, Los Angeles, have already run several successful meets under independent auspices, including a ladies' affair, something never tolerated under A. A. A. sanction.

With the A. A. A. out there will probably result a complete reorganization in racing through a combination of the speedways and drivers. This will bring about new contest rules. It is reported that the question of transportation for racing cars has been taken up with the railroads and that definite assurance has been given of ample facilities for the season.

Motor Cars Slow to Follow Price Increase Trend

One way in which motor cars have been slow is in following the world-wide price-increase movement in nearly all lines during the last three years. This fact has been developed in a surprising way by a comparative

analysis of price fluctuations of automobiles and leading commodities just made by the National Automobile Chamber of Commerce, as shown in the accompanying table. The average wholesale price of all the automobiles and motor trucks produced in the United States during the last six years shows a decrease each year ranging from 4.7 per cent to 16.5 per cent until last year, when there was an increase of 4 per cent. Prices of thirteen principal commodities, as reported by Bradstreet's index, decreased slightly until 1915. In that year they increased 18 per cent; in 1916 more than 28 per cent and last year more than 30 per cent. English commodity prices have increased 87.5 per cent since 1913.

	Motor Vehi- cles Average Whale Prices.	Per cent in- crease or de- crease.	Bradstreet's Commodity Index.	Per cent in- crease or de- crease.	London Econ- omist Com- modities In- dex.	Per cent in- crease or de- crease.
1912	1000		9.54		2721	
1913	877	-123	9.23	-032	2661	-022
1914	806	-081	9.03	-022	2760	+032
1915	770	-047	10.65	+180	3500	+271
1916	640	-165	13.66	+282	4779	+365
1917	666	+040	17.81	+305	5768	+207

George Washington Sweepstakes, March 10

Dario Resta may break a period of retirement since 1916 by appearing as a starter in the third annual running of the George Washington sweepstakes on the Ascot speedway, Los Angeles, scheduled for March 10, over two weeks after the national holiday for which it is named. The Ascot management has received no discouragement in its overtures to the 1916 champion, who has been offered the additional inducement of a promise to back him on the part of Addison Brown, a millionaire sportsman. In 1916, coming fresh from his triumphs at Santa Monica, Resta gave the Ascot course brief consideration for a Thanksgiving Day entry but decided that it was too rough. Entry blanks have been issued to a number of drivers who are rarely unresponsive. Probabilities are Pullen, Cooper, Hearne, Moosie, Milton and Oldfield. The George Washington sweepstakes will be run under a \$5,000 purse and will consist of three heats of 10 miles each.

Maxwell Regains Mount Wilson Record

The Mt. Wilson mountain-climb record is once more within the Maxwell fold, placed there by the daring driving-craft of Walter Lord of the Lord Motor Co., Los Angeles. This mark was originally set by the late Billy Carlson in his Maxwell. Carlson's time was 29 minutes, 1 second. The record stood for a couple of years and was broken, just recently, by a twelve-cylinder car which negotiated the hard trail in 27 minutes, 17.2-5 seconds. This time the mark stood for one week when Walter Lord in his four-cylinder Maxwell made the strenuous climb in 26 minutes, 56.1-5 seconds, clipping 21.1-5 seconds off the mark made by the twelve-cylinder car.

Joy Retires as Lincoln Highway President

Henry B. Joy will retire from the presidency of the Lincoln Highway Association and it is probable that F. A. Seiberling will succeed him. The advisability of continuing road work in Utah and Nevada will be discussed at the next meeting of the association. Seiberling contributed \$100,000 to this work, John N. Willys, \$50,000, and Carl Fisher, \$25,000.



Rain, Snow and Mud Fail to Stop Armleder Driveaway

About a month ago the Philadelphia representative of the O. Armleder Co., of Cincinnati, wired for the immediate delivery of six $3\frac{1}{2}$ -ton trucks. The railroad officials could offer no prospect of immediate action, and the factory people decided on a driveaway over the 610 miles between Cincinnati and the Quaker City.

The six trucks pulled out of Cincinnati on Wednesday, and immediately outside the city ran into two feet of snow on the level and many drifts thrice that deep. Although provided with ropes, shovels and other equipment for digging out of drifts, these were not needed except in several cases where passenger cars and other trucks were stalled, and the Armleder crews performed the good Samaritan act.

Leaving Columbus, O., on Thursday, the much warmer weather made the roads extremely muddy, and at noon, after covering 169 miles, the outfit stopped at Zanesville to put on chains. The average gas consumption to this point was $6\frac{1}{2}$ miles per gallon, and the average speed 10 miles per hour. Outside of Zanesville the expedition ran into a driving rainstorm, which grew heavier as night approached, until on reaching Morristown, at 6 in the evening, with rear wheels plowing through hub-deep mud, it was decided to lay over till morning.

Next day, Friday, despite the warnings of the natives, the driveaway started, and till midday battled with the heaviest mud it had ever been the misfortune of any of the drivers to encounter. But the fleet finally pulled up on high ground, and after an examination started through the mountains, reaching Brownsville for the night stop.

Saturday and Sunday it was a case of shoveling snow at many points in order to get through; but the work was a godsend, as it enabled the crews to keep warm in the sub-zero weather. Monday found the fleet on the Lincoln Highway, and after that it was easy all the way to Philadelphia. Undoubtedly the patented spring suspension and flexible motor mounting of the Armleder prevented many mechanical troubles in the exceptionally heavy going in Ohio and Western Pennsylvania, the driveaway having proved a test which would have brought out any inherent defects in the trucks.

Camelford Extension for Ford Cars

The Camelford Extension for Ford cars has the principle advantage of eliminating the somewhat dangerous overhang that exists with other truck-making Ford attachments which retain the original Ford chassis length of 33-inches. The Camelford Extension lengthens the chassis up to $70\frac{3}{4}$ inches and accommodates a body 9 inches long without an inch of overhang. The Extension consists of a complete pressed steel frame; propeller shaft and housing; brake rods and necessary rods and bolts. With a Camelford the Ford car may be converted into a

light truck within two hours by any mechanic without drilling a single hole in the Ford frame. It retails for \$60 on the Pacific Coast and is distributed by the Goldman Auto Co., 1010-20 Folsom St., San Francisco, Cal.

Maxwell Truck in 2500-Mile Mid-Winter Trip

Traveling under weather conditions that ranged from 30 degrees above to 12 below zero, a Maxwell one-ton truck was recently driven a distance of 2,500 miles between New York, Jacksonville, Fla., and Washington, D. C. Gasoline mileage ranging as high as 15.1 miles to the gallon with but minor adjustments was certified to in the official report of the American Automobile Association, signed by James A. Hemstreet, technical observer. One coil spring and one fan belt was replaced during the trip. After completing its official run the truck was driven from New York to Detroit, contending with ice and snow all the way, particularly in Pennsylvania and Ohio, where it bucked the snow for a 750-mile stretch.

Spokane, Wash.—The Eastman Motor Car Co., Cadillac and Hupmobile agents, will have a new garage, costing about \$37,000, built for it; the temporary quarters of the company have been located at W1124 Sprague Ave.



HERE IS A HALF-TON OF HEAVY-DUTY TRUCK SELLING ABILITY

It takes big men to sell big trucks. Forrest J. Alvin, general manager of the United States Motor Truck Co., of Cincinnati, O., is a larger man himself, and has gathered around him large men, and incidentally experienced men, as assistant sales managers of the company.

At the Chicago Show, Robert S. Stewart, vice-president of the company, and Mr. Alvin, held a sales conference, and many of their assistant sales managers were present. At one meeting these two gentlemen, with two of their assistants, took stock, and much to their surprise found that there were present just one-half ton of heavy-duty truck salesmen. Mr. Alvin, with a weight of 270 pounds; P. D. Sampson, in charge of Ohio, West Virginia and Indiana territory, 270 pounds; W. B. Cochrane, western sales manager, 240 pounds, and Robert S. Stewart, vice-president, 220 pounds, made up the 1000 pounds of heavy-duty salesmen at the gathering, and the incident was considered so noteworthy that the quartet were photographed.



Rear View of Williams Spotlight

...THE...

Williams Spotlight

Model A, 6-inch Reflector - \$9.00

Model B, 7-inch Reflector - 10.00

Both models have regulating device integral with bracket which limits the vertical movement of the lamp, thus complying with the lighting laws.

Detachable for Trouble Lamp or for lighting camp at night. The lamp handle contains the "off" and "on" dust-proof and water-proof switch which is conveniently located at the rear of the lamp.

We sell through jobbers only, and are represented on the Pacific Slope by

HUGHSON & MERTON, Inc.

SAN FRANCISCO

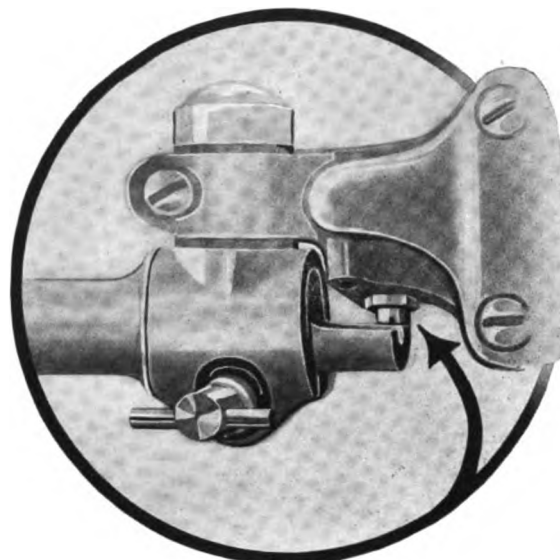
BRANCHES IN LOS ANGELES AND PORTLAND

MANUFACTURED BY

WILLIAMS MFG. CO.

310 North Flower Street

SANTA ANA, CAL.



Detail of Adjustable Control Feature of Williams Spotlight

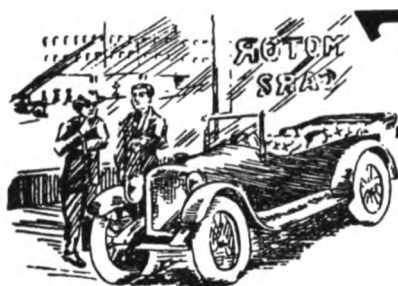
The Gasoline of Quality



Clean cylinders because Red Crown explodes completely, having correct boiling points in a continuous chain.

Standard Oil Company
(California)

**clean
cylinders**



Trade Briefs and Factory Gossip

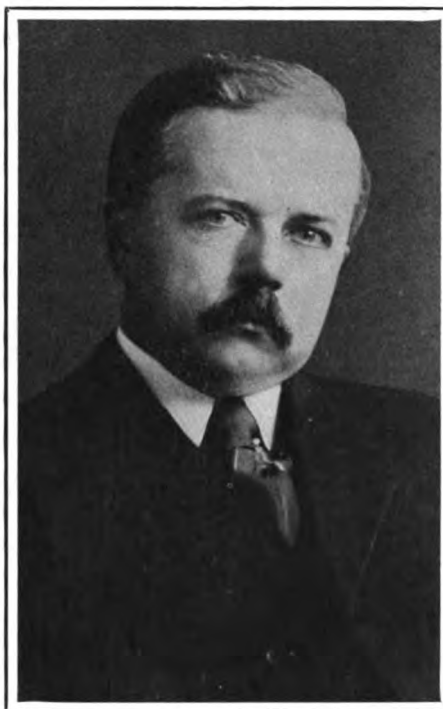
24,000,000 Champion Plugs in 1917.

Evidence of the rapid strides made in the motor industry during the last seven years is found in production figures announced by the Champion Spark Plug Co., Toledo, O., covering that period. In 1910, the year it began operation in Toledo, this concern manufactured 300,000 spark plugs. Two years later, or in 1912, the goal attained was 2,000,000. In 1915, the production jumped to 7,000,000 and in 1916, the total was 14,000,000. Last year, the production exceeded 24,000,000, or 80 times that of 1910. The total represents 4,000,000 more than the goal set by the company's officials at the beginning of 1917. In December, the most productive month of the year, 2,500,000 plugs were manufactured. Anticipating additional demands, the Toledo manufacturers are practically doubling the capacity of their plant.

* * *

Harroun Producing 25-30 Cars Daily.

The Harroun Motors Corp., Detroit, is now turning out from 25 to 30 cars a day and expects to have about 1,000 men in its employ by March 1. The manner in which the Harroun organization has steadily forged ahead during the past year against discouraging conditions has provoked favorable comment.



F. A. SEIBERLING,

Who Heads the Goodyear Tire & Rubber Co.
and Lincoln Highway Assn.

H. L. McClaren Heads Ajax.

H. L. McClaren, who has complete charge of sales of the Ajax Rubber Co., while also acting as vice-president, has been elected president of the company. He succeeds W. G. Grieb, president since 1910 and who retires from active connection with the company. At the same time Fred E. Dayton, general sales manager, has been elected secretary. Stuart Webster, treasurer of the Racine Rubber Co., was elected as one of the vice-presidents. McClaren, the new president, has been connected with the tire industry since 1900, when he joined the Morgan & Wright Co. He became vice-president of the Racine Rubber Co. in 1912 and president in 1914. Followed a year's connection with the Lewis-Mitchell Co. as its president and then he returned to the Racine Rubber Co.

* * *

Maxwell Dividend in Scrip.

The Maxwell Motor Car Co. has declared a dividend payable in scrip on the first preferred stock of the company. The dividend, amounting to 1 3/4 per cent, will be dated April 1, 1918, and due April 1, 1920. It will bear interest at 6 per cent, payable semi-annually April 1 and October 1, and may be redeemed by the company at any time.

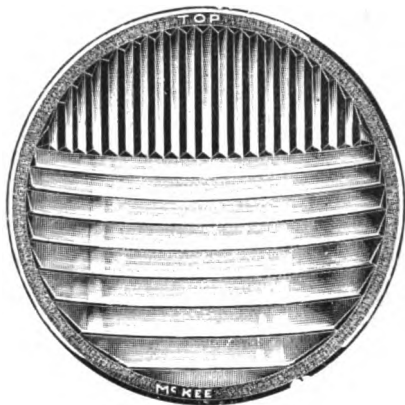


322 MILES OVER SNOW-BLOCKED ROADS IN A STUDEBAKER IN LESS THAN SIXTEEN HOURS.

Just why he did it is not apparent; but the Studebaker dealer in Syracuse, N. Y., watching the drifts pile up outside the doors of his establishment, suddenly announced his intention of driving to New York and having a look at the National Show, then in progress in the metropolis. He is the boss, and there was no one to stop him—although there were some mild hints from his subordinates to the effect that the railroads were still operating, even though the drifts were growing deeper every minute, and that a warm sleeper was preferable to a cold touring car, even though it be a Studebaker.

The boss called for a volunteer, and in less than an hour the pair, swathed in heavy coats and woolen helmets, were headed east on the 322-mile trip, and in a car that already had over 11,000 miles to its credit. For over 15 hours, with but a few stops for warm food and drink the Studebakerites plowed through the storm, breaking road for a greater part of the distance, until they got into the environs of Gotham. Taking a peep at the show, the two snow-birds went—to a hotel for a long sleep? Not at all. They just climbed back into the car and took it back to Syracuse, the engine not having stopped once during the round trip. There were no repairs or adjustments or punctures. But brrr!

McKEE LENSES



Add 63% to road light and
allow no light above 42 inches
The best and most efficient lens
made

Prices from \$2⁷⁵ to \$4²⁵ a pair
AGENCIES NOW BEING PLACED
HOWARD AUTOMOBILE COMPANY

SAN FRANCISCO

LOS ANGELES

PORTLAND

OAKLAND

Hooverizing the Motor Car

It being essential that we should all economize in every way possible, why not permit us to demonstrate to you the

GRÜSS AIR SPRING

which if installed on your motor car will enable you to realize wonderful saving in the expense of operation.

No rocking or swaying on curves. The only "two-way" action air spring in existence.

Cushion of Compressed Air above absorbs all shock.

Vacuum below absorbing all recoil.

The GRÜSS is the most efficient. Practically no attention required, making the GRÜSS the least expensive AIR SPRING to be had. **GUARANTEED 5 YEARS**

HOOVERIZE BY SAVING TIRES, MOTOR BEARINGS AND ENTIRE EQUIPMENT.

THE GRÜSS AIR SHOCK ABSORBER

Made in California

MAIN OFFICE AND INSTALLING PLANT

PNEUMATIC CUSHION COMPANY

179 Grove Street

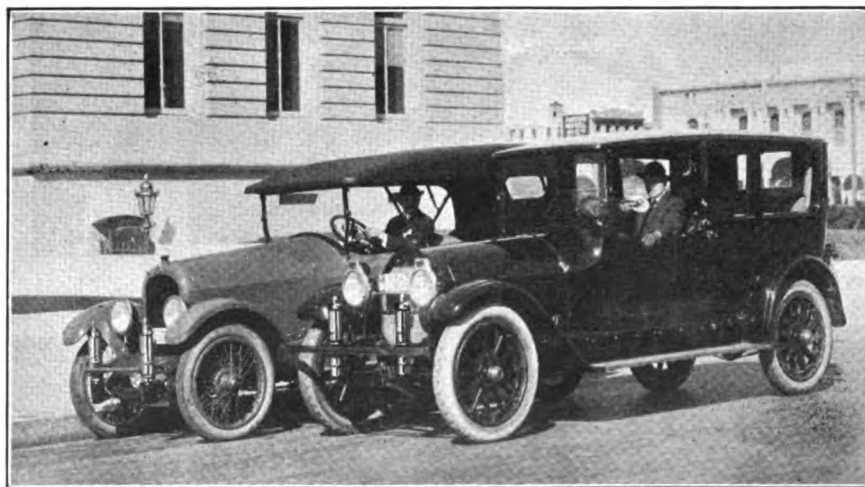
San Francisco, Cal.

Phone Park 4548

Los Angeles Branch

MESSRS. CARTER & VANBERG

775 Towne Avenue



Allen's Sales Manager Married.

Les W. Place, general sales manager of the Allen Motor Co., Fostoria, O., was married, February 5th, to Miss Vera Clark, daughter of Herbert J. Clark, of Minneapolis. The bride for several years has been a prominent member of Minneapolis society and is well known in New York and Paris, where she has spent considerable time in the study of art. Mr. Place not only heads the sales organization of the Allen industries, but is also sales manager of the truck division of the Turnbull Motor Truck & Wagon Co., Defiance, O. After the wedding Mr. Place and his bride left for Southern California, and the Hawaiian Islands. Upon their return they will make their home in Fostoria.

* * *

Hurlburt Motor Truck Re-Financed.

The Hurlburt Motor Truck Co., New York City, has been re-financed and has acquired ample resources for the building of 1,800 during the present year. The re-financing operations consisted of the underwriting of \$288,000 worth of 7 per cent preferred stock and notes to the amount of half a million dollars, and plans for the issuing of 50,000 shares of common stock at no par value to be sold to the public at \$20 at first. The report of the company's auditors shows a total net profit of more than \$1,011,000, after setting aside a separate reserve of \$150,000.

* * *

U. S. Truck Plant Expanding.

Substantial additions are being made to the immense plant of the United States Motor Truck Co., of Cincinnati. The present buildings occupy a space of one and one-half blocks square, on which there are three sets of buildings three stories in height. To this group is being added a modern brick and steel building, one-half block square, and three stories in height. This structure is to be used for the testing department, paint shop, and for final assembly. Later there will be a new addition one and



LES W. PLACE,
General Sales Manager The Allen Motor Co.,
Fostoria, O.

one-half blocks long and three stories in height, making the complete plant one of the largest devoted to motor truck manufacture exclusively in the United States. All of these additions have been made necessary by the rapidly increasing manufacturing business of the company.

* * *

Newton Heads White Advertising.

Millard H. Newton has been appointed advertising manager of the White Co., Cleveland, O., succeeding James A. Harris, Jr., who resigned to take a captain's commission in the Q. M. C. corps, U.S.A. Newton has been connected with the White advertising department for the last five years.

Clyde Cars 12 Per Ct. Stock Dividend.

The annual stockholders' meeting of the Clyde Cars Co., builders of the Clydesdale motor trucks, was held at Clyde, O., Feb. 4th, and a very satisfactory report read of last year's business. The company's sales for the year were \$1,331,045.91, and after deducting all costs and expenses, and allowing for war and excess profits taxes, a balance of \$41,259.64 was carried to surplus account. A stock dividend of 12 per cent was subsequently declared to stockholders of record February 4th, and plans approved for continuing the management's policy of increased production and expansion.

* * *

R. T. Walsh Joins Intake Heater.

Robert T. Walsh has taken charge of sales and advertising for the Electric Intake Heater Co. He was formerly advertising manager for the Maxwell Motor Co. and later acted in the same capacity for the Briscoe Motor Corp.

* * *

"Drive-Aways" Have Come to Stay.

Drive-aways have come to stay and will never cease to be a feature in the automobile manufacturing industry, in the opinion of C. S. Rieman, vice-president and general manager of the Elgin Motor Car Corporation, Chicago. Mr. Rieman believes that even when the freight troubles have all been settled, cars will still continue to go to destination over the roads. The dealers have solved the problem of drive-aways to such an extent that cars are placed at their destination in just as good shape as though shipped, and the recent Court decision to the effect that cars so driven by careful operators are really improved and not injured, has aided in making the drive-away a feature of the business.

* * *

Otis Friend Back at His Desk.

Otis C. Friend has taken up his duties as vice-president of the United Motors Corp., of New York City, having returned from a recent visit to Southern California to brave the climatic rigors imputed to the eastern section of the country at this time of year. Friend comes from the presidency of the Mitchell Motors Co., Racine, Wis.

* * *

New McGraw Tire Appointments.

The McGraw Tire & Rubber Co.'s board of directors has ratified the following appointments: R. E. Hayslett to be assistant treasurer, with H. B. Callahan as assistant; Robert Chaplow, production superintendent, and former Traffic Manager A. C. Redman, industrial manager.

* * *

Toback Heads Redden Truck.

S. S. Toback has been elected president of the Redden Motor Truck Co., of Chicago. The instant success which has brought him to this high position in the company's affairs is indicated by the fact that he was appointed general manager only late last December.

MEET MORGAN ROSS

at the

BELLEVUE HOTEL

SAN FRANCISCO



The Bellevue has well been termed "more comfortable than home," because it has the spirit of good service and all the facilities that produce it. The name of Morgan Ross is inseparably associated with super excellence of hotel keeping and completes the assurance of perfect satisfaction.

—Accessible—Every downtown attraction within four minutes walk.
—Comfortable—300 superior rooms with bath. —Enjoyable—a table of unusual excellence. —Reasonable—Very moderate rates. Commendable —Real personal service. American plan from \$4.00. European plan from \$2. Wire or write for reservations. MORGAN ROSS, Manager.

GEARY AT TAYLOR STS.

NORWALK TIRES

"SOME RUBBER"

You see them everywhere you go. All State-owned automobiles from Shasta to Tia Juana are equipped with them, many of the biggest corporations are using them exclusively and thousands of motorists select them in preference to all other makes. Norwalk mileage performance tops 'em all.

Adjusted on a basis of 7500 miles for Ford sizes and 6000 miles for larger sizes.

FACTORY DISTRIBUTORS

LICHTENBERGER-FERGUSON CO.

1211 Van Ness Avenue
San Francisco

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Los Angeles

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Fresno

OPEN TERRITORY FOR DEALERS STILL AVAILABLE

AT YOUR SERVICE

2800 TRAINS DAILY

Fast
Comfortable
Convenient
Dependable

NORTH

Between
Interurban Points
in
Southern California

WEST



EAST

Orange Empire
Trolley Trip
To Riverside, San Bernardino, Smiley Heights and Redlands.
\$3.50

Mt. Lowe
World's Most Famous Mountain Scenic Trolley Trip.
Round Trip Fare \$2.00

Pacific Electric Railway



THE TEN-YEAR TEST

HAS PROVED THE EFFICIENCY OF THE
DUPLEX 4-WHEEL DRIVE PRINCIPLE

There is nothing new about the principle of making every wheel a driver!

Duplex originated it ten years ago.

Only the first model was experimental. And it was this model which shattered all existing records for hauling, hill climbing, and exacting road-ability under the severest conditions.

Today, the Duplex Truck is a product of experience. To Dealers.—With production trebled, our dealer organization is being enlarged. Write for our dealer proposition and the heavy haulers' magazine, "Duplex Doings," issued in the interest of better transportation methods.

Address All Communications to Dept. 102

DUPLEX TRUCK CO., - Lansing, Mich.



AERO-CUSHION TIRES MAKE PUNCTURES IMPOSSIBLE.

The Aero-Cushion Inner Tire is claimed to make blowouts, punctures and rim cuts absolutely impossible, owing to the confinement of the air in the pores of the soft, inner tire of pure para rubber. In effect it is an air-filled inner tire in which the air is divided into countless pores and air chambers instead of being confined in one large rubber tube. The air is imprisoned without pressure, making it impossible for it to escape by puncture or cuts. The Aero-Cushion Tire is attached to the outer casing by means of special appliances and each casing is placed on equal perfect traction, which makes the car roll easier and steadier than with the present air-filled tires. As soon as a casing wears out they can be transferred to another new one and manufacturers in rigorous tests have secured 15,000 miles of travel on outer casings with the use of Aero-Cushion Tires. They are manufactured by the Aero-Cushion Tire Co., San Jose, Cal.

AMBU DETECTS AND LOCATES ELECTRICAL TROUBLES UNERRINGLY.

Nine-tenths of the money, time and patience lost with ignition and starting troubles would never occur could sufficient and timely warning be given to the driver. It costs but a few cents to repair any part of automobile electrical equipment if the trouble is located at once and not neglected. The purpose of Ambu is to positively and automatically detect and quickly and accurately locate the electrical troubles in any standard made American car. Its dial tells the truth quickly and unerringly before the mechanic is put to the necessity of completely dismantling the electric system. This trouble-saving device is handled by N. F. Andruss, 404 Golden Gate Ave., San Francisco, Cal.

DIAMOND STOP AND TURNING SIGNAL.

With the Diamond Stop and Turning Signal for automobiles both signals on the rear of the car showing red indicates a stop, the left-side signal alone showing red gives warning of a turn to the left and the right-side signal shining red is for a turn to the right. The Diamond Signal consists of two well-designed, diamond-shaped lamps fastened to the right and left side of the rear of the car. The glasses do not show red during the daytime and at night only in case of a stop or turn. A small, one-lever switch on the steering column operates the Diamond Signal. The device is patented and manufactured by the Diamond Signal Co., 715 Market St., San Francisco. Price \$15 a set.

McKEE STANDARD LENS.

One of the most convincing exhibits at the recent Pacific Automobile Show in San Francisco was that of the McKee Standard Lens, manufactured by the McKee Glass Co., Jeannette, Pa., and represented on the Pacific Coast by the Howard Automobile Co., P. D. Chamberlain, the Coast

factory representative, was in personal charge of the exhibit, and reported that an exceptionally large volume of business had been developed at the show.

The McKee Standard Lens throws a strong beam 500 feet ahead of the car and also furnishes a clear, revealing side light which is thrown at an angle of about 45 degrees directly in front of and to the side of the car. When the car turns a corner, the side light shifts at the same angle with the car and always keeps the roadside well lighted. The McKee lens is of concave-convex shape. The lower two-thirds of the front part of the lens are cut in the shape of a series of horizontal



FRONT VIEW OF McKEE LENS.

prisms piled one above the other. The upper third is cut in a series of vertical prisms. The lower horizontal prisms concentrate and turn downward the light rays, so that the beams of light point horizontally not more than 75 feet ahead of the car nor more than 42 inches above street level, complying in every particular with the motor vehicle statute of the California state law. The upper vertical prisms disperse the light sideways, directing at no point a strong beam of light, but a diffused glow. This soft light is obtained, in accordance with the well-known law of optics, by refracting the purple, blue and violet rays, the ones most harmful to the eyes, downward at a sharper angle than the colors at the other end of the spectrum, the red, orange and yellow. The ultimate result is a strong, mellow beam of light.

EDSTROM RIM CAN BE REMOUNTED IN 12 SECONDS.

The Edstrom Rim, handled by the Edstrom Rapid Remountable Rim Co., 767-68 Phelan Bldg., San Francisco, can be unlocked, removed, replaced, and locked in 12 seconds. It eliminates all bolts, nuts and lugs and uses an interlocking device inside, between the felloe band and the rim. There are two set-screws, which are not removed, but only loosened. The Edstrom Rim cannot get out of order, strip threads, squeak or rattle, rust or stick or gather mud, or dust between the felloe band and the rim.

ESTA AUXILIATOR SAVES FUEL AND ADDS POWER.

Clarence R. Stern, California agent for the Esta Auxiliator, advises "Motor West" that he has made arrangements to have the Rex Auto Supply Co., 200 Golden Gate Avenue, represent that device in the San Francisco district. It is listed at \$15 complete, ready for attachment. The work can be done by anyone familiar with a motor.

The Esta Water Auxiliator is a device which automatically feeds water vapor to the intake manifold above the carburetor, the result being more flexibility in the motor, increased power, added speed and smoother operation. Besides which it is claimed that a motor fitted with the Auxiliator will be free from carbon and consume from 10 to 25 per cent less gasoline, due to the perfect combustion resulting from its use. The Automobile Club of America and the Pratt Institute, of Brooklyn, N. Y., have, it is stated, scientifically tested this device and have confirmed the claims of the manufacturer.

THE VALUE OF A PISTON RING.

Mechanics and mechanical engineers agree to the axiom that to have a gas-tight combustion chamber, the opening between the piston and cylinder wall must be closed by means of a piston ring to prevent the gas from escaping by the piston and thus being wasted. A piston ring will hold back the compression if it absolutely seals the groove and cylinder wall. Piston rings usually have an opening at the bottom that allows compression to pass by it. Various ring manufacturers have endeavored to close the gap in the ring, and the Double Seal Ring Co., manufacturers of Double Seal piston rings, have succeeded. These rings are the latest word in scientific design and mechanical construction. Deriving their name from both their form and function, they are properly called the Double Seal because they form a continuous and solid ring in the piston groove; the double edge being down and making contact against the bottom face, it seals the joint or gap in the groove, and also being double around the cylinder, it seals the wall and it seals them absolutely, hence the name Double Seal.

UNIVERSAL DISTILLATE BURNER.

The Universal Distillate Burner is a device which connects between the carburetor and the intake manifold and taps the exhaust manifold, providing a method for making efficient use of low-grade petroleum as a fuel for internal combustion engines. A one-inch pipe carries heat from the exhaust manifold to a burner. As the raw low-grade oil passes through the burner it is broken up and vaporized into a perfect combustion gas which explodes readily in the cylinder and is claimed to give a saving of 60 per cent in fuel bills. Engine distillate is recommended as a cheaper and better fuel in the Universal Distillate Burner. It is handled on the Pacific Coast by Oscar Hundebv, 349 Van Ness Ave., San Francisco, Cal.

Investment vs. Expense

A cheap porcelain plug is a double expense. FIRST: It needs frequent renewals on account of breakage and sooting. SECOND: It's a waster of gas and money.

HERZ PLUG

"Bougie Mercedes"

once properly installed ask only one favor of you, viz.: to leave them alone.

They last as long as your pistons and crank shaft—a real investment.

They insure perfect and vigorous combustion of all the gas.

Let us educate you up to Herz Plugs. They're \$1.50 at your dealer's, or



\$1.50

at your dealer's

or

HERZ & CO.
245 W. 55th St., New York



QUALITY COUNTS

YOUR choice of ignition should be governed by the reputation of the system. Get known reliability, and efficient service with your motor. Approximately **3,000,000 BOSCH MAGNETOS** made and sold on a quality basis have made good with owners everywhere.

Let the car you buy or sell have quality ignition.

Correspondence Invited.

Bosch Magneto Co. - - New York

Coast Branch: 1324 Van Ness Ave., San Francisco

Coast Distributors: E. A. Featherstone, Los Angeles
Ballou & Wright, Portland and Seattle
Kimball-Upsen Co., Sacramento

PISTON SERVICE



Light Weight, Any Make

Cast Iron Pistons

Are the BEST by TEST

FINISHED

SEMI-FINISHED

or ROUGH

LARGEST PRODUCERS IN THE WEST

W. H. JAHNS AUTO MACHINE WORKS

908-912 West Pico St.

Los Angeles, Cal.



HOTEL ST. FRANCIS San Francisco

Center of the City's Life and Color

EUROPEAN PLAN FROM \$2.00

Management - James Woods

GENERAL FABRIC AND CORD TIRES.

In the General tire, manufactured by the General Tire & Rubber Co., Akron, O., the black tread has a larger percentage of pure rubber than is customary, giving the tread great resiliency and tough wearing qualities, and making it more resistant to cuts and bruises. An extra heavy thickness of pure cushion rubber holds



TWO TYPES OF GENERAL TIRES.

together the tread and the fabric of the tire. The rubber cushions between the layers of the fabric are also of unusual thickness, giving the fabric excellent protection. The whole tire is cured at one operation, resulting in a better union of its different parts. The General tire line includes fabric tires, cord tires and tubes. The General Jumbo tire is a special over-size tire made to equip Ford, Maxwell and Chevrolet cars. The manufacturers sell the General tire under a guarantee of 5,000 miles.

EVERBRIGHT BODY AND METAL POLISHES.

The Everbright Mfg. Co., with offices and sales rooms at 409 Golden Gate Ave., San Francisco, Cal., is manufacturer and distributor of the Everbright Automobile Polish, the Everbright Metal Polish and the Everbright Automobile Top Dye. The Automobile Polish is for removing dirt, grease and marks from car bodies and restoring the original finish. Prices are 15 cents a half-pint can, 25 cents a pint, 75 cents a half-gallon and \$1.25 a gallon. The Everbright Auto Body Polish is a quick-working polish for brass, copper, nickel, silver, aluminum, etc. Prices, pint 75 cents; 1/2 gallon, \$1.75; and gallon, \$3. The Auto Top Dye is claimed to give a coal-black, silky finish and water-proofs old mohair or canvas tops.

FIVE STAR LUBRICANT IS NON-MELTING COMPOUND.

Five Star Lubricant is designed to avoid all corroding and rusting of metals in the lubrication of transmissions, differentials and grease cups, such as arises with commercial greases containing from 12 to 20 per cent of water. Heat is the great foe of efficient lubrication and Five Star has the supreme advantage of being entirely impervious to heat. Boiling it

for a stretch of ten or even twenty hours will not liquefy it, and even if it catches fire from direct contact with an open flame it will only burn and coat over, leaving the greater part of it uninjured and its lubricating qualities practically as good as before. Five Star is not meant to supplant engine oils or to be used in forced feed or splash lubrication, its decided non-melting qualities making it a specialty for the heavier working parts of the automobile. The distributors of Five Star Lubricant in this territory are Lomax & Chapman, 268 Market St., San Francisco, with main offices in the First National Bank Bldg., in the same city.

MACBETH LENSES SATISFIES ANTI-GLARE LAWS.

All automobiles should be equipped with lenses. Ever since the powerful electric headlight displaced the old acetylene lamp safety itself has demanded some means of subduing the dangerous glare. Now the police authorities everywhere are exacting a rigorous observance of anti-glare laws.

Macbeth Lenses are the outcome of four years of study and experiment to overcome the seeming paradox that confronts all makers of automobile head lamps and lenses—namely, the problem of producing a powerful beam that will illuminate the roadway ahead of the car, and yet at the same time have it so controlled that it works no discomfort to the eyes of pedestrians or drivers of vehicles traveling in the opposite direction. In the Macbeth Lens the horizontal prisms on the front face have the proper angles to bound the blinding rays down to a useful position on the road. The visor on the top and the lower prisms of suitable angle shut off the glare and make the light safe and in conformity with the various headlight laws.

The concave cylindrical depressions on the back surface of the Macbeth Lens spread the light horizontally to a slight extent, destroying to a large extent the images. The illumination is so much more uniform that the light is tremendously effective. Macbeth Lenses are handled by the Chas. A. Bacon Co., 417 Montgomery St., San Francisco, as Western distributor. This company is also preparing to market the Liberty Lens, a glare-killing device manufactured by the same firm, the Macbeth-Evans Glass Co., Pittsburgh, Pa.

GILSON FIRESTONE CARBURETOR PRODUCES A DRY GAS.

The Gilson Firestone Carburetor is designed to produce a perfect dry gas, the same as is used in an ordinary gas or gasoline stove. The wet, imperfectly vaporized form of gas is the cause of fouled spark plugs and other ills that accompany carbon-choked engines. The Gilson Carburetor is sold in three designs, one for using kerosene only, price \$30, another for kerosene and gasoline, half-and-half, price \$22.50, and a third for gasoline only, price \$20. The kerosene device consists of carburetor, heat pipe, water circulator, new belt and bolts, one gallon tank, fuel line, three-way valve choke and dash rod and is claimed to give 25 to 33 miles per gallon, depending on kerosene, gasoline or distillate. The half kerosene device consists of carburetor, heat pipe, extra gallon tank, fuel line, three-way valve dash rod and choke, giving a mileage of from 25 to 33 miles per gallon. The gasoline Gilson carburetor includes only the carburetor and heat pipe, nothing else being necessary, and gives mileage varying between 25 and 30 miles a gallon.

THURSTON MOTOR FUEL GASIFIER.

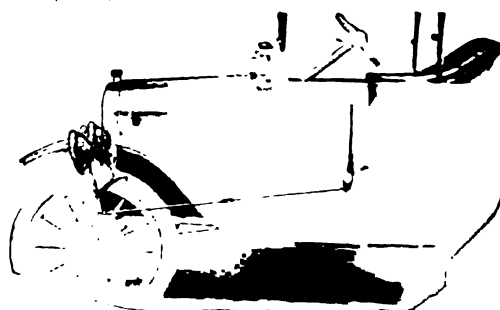
The Thurston Motor Fuel Gasifier enables any type of motor vehicle engine to burn engine distillate, kerosene or coal oil, benzol, naphtha, Eastern motor spirits, and any mixtures combined with them, such as ether, water or crude oil. The motorist can therefore use, to his complete satisfaction, substitutes for gasoline which can be bought at prices ranging from 33 1/3 to 50 per cent less than the cost of gasoline. It is also claimed that by insuring complete combustion the Thurston Gasifier increases the efficiency of any automobile engine by from 20 to 40 per cent. It employs mechanical force, as well as the heat principle, to break up the fuel into a perfect gas. The Gasifier is located inside the exhaust manifold and is protected by a middle chamber through which the gas passes to the engine cylinders. It contains a breaker screen and distributor made of fine mesh brass wire so designed as to eliminate all clogging and choking. The direct heat from the exhaust passing through both the outside and inside chamber brings the Gasifier to a very high temperature and the fuel vapor from the carburetor is broken up by the deflecting screen and turned into a highly combustible gas. The Thurston Motor Fuel Gasifier is sold by the Savage Tire Corp., San Diego, Cal.

PRESTO-CLOTH FOR BLURRED WINDSHIELDS.

Presto-Cloth is a chemically prepared cloth which with one application over a wet windshield causes rain or snow to run off, giving the driver a clear vision of the roadway ahead of him and timely foresight of the various pitfalls he may have to encounter. It contains no oil or grease and is non-smearing to the windshield. The Presto-Cloth sells for 50 cents each and is manufactured by the Presto-Cloth Mfg. Co., Inc., of Toledo, O., and is sold by all first-class dealers.

AITCHANDEE FORD SHOCK ABSORBERS.

The Aitchandee Ford Shock Absorbers are claimed to increase tire mileage fully 20 per cent and at the same time prevent spring breakage, all jiggling, side-sway and rebound, thus enhancing the pleasure of riding and lessening the general depreciation of the car. They require no boring of holes or other injury to any part of the car and are attached with ease. The construction is based on the new lock bolt, which makes oiling unnecessary. Aitchandees are fully guaranteed as mechanically perfect, the springs being of the best spring wire steel and the arms of specially annealed malleable iron. The Aitchandee Single Arm Shock Absorber sells for \$10 per set of four; the Twin Arm, \$12 per set of four; and the Ford Truck Shock Absorber, \$15 per set of four. Manufactured by the H & D Co., Goodland, Ind.



HOW H & D LAMP DEFLECTOR OPERATES.

LANE'S "H-C" JACK

Easily Operated. You Keep Clean.
Absolutely Dependable.

HANDLE IS JOINTED IN THE MIDDLE FOR
STORING AWAY



PLACED
OPERATED
REVERSED

by one band from end of handle

No. 14, Lifts 1800 lbs. \$4.50

No. 16, Lifts 3000 lbs. \$6.00

At All Supply Stores, or Prepaid to You
Upon Receipt of Price

LANE BROS. CO., - POUGHKEEPSIE, N. Y.

DENBY MOTOR TRUCKS

Pioneers of the internal-gear drive

Denby trucks are built in 1, 2, 3 and 5 ton capacities,
and with bodies for every line

DENBY MOTOR TRUCK COMPANY
Detroit Michigan

Elgin Six

"The Car of the Hour"

Big, Beautiful, Impressive, Powerful, Dependable,
Economical

"Built Like a Watch"

4-Passenger Roadster \$1095
5-Passenger Touring Car

Subject to Change Without Notice

Write for descriptive catalogues

Elgin Motor Car Corporation CHICAGO U. S. A.



Every practical size
of truck for every
trucking need. GMC Trucks represent
the finest in construction and
are backed by an old, firmly-established
organization. Write TRUCK
HEADQUARTERS for information.

GENERAL MOTORS TRUCK COMPANY

One of the Units of General Motors Corporation
Pontiac, Michigan
Branches and Distributors in principal cities. (280)

OLYMPIAN

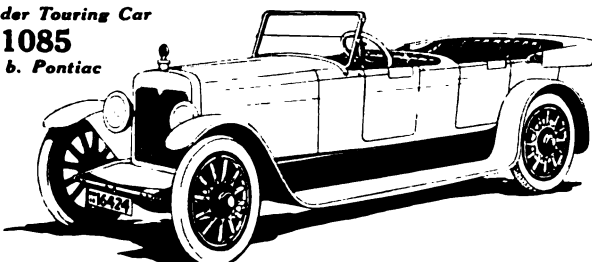
One Hundred Percent Car

Write for dealer proposition

4-Cylinder Touring Car

\$1085

f. o. b. Pontiac



OLYMPIAN MOTORS COMPANY, Pontiac, Mich.

IN ARMY SERVICE

On the battlefields of Europe and Asia, Wisconsin Motors are giving the same consistently, dependable service that has made them champions of the world on road and speedway. What better evidence could be had of their fitness for heavy truck service?

Truck models built in 4 and 6 cylinders.
Write today for specifications.

WISCONSIN MOTOR MFG. CO., MILWAUKEE, WIS.
Sta. A, Dept. 314.
Pacific Coast Distributors: Earl P. Cooper Co., 1428 Bush St.,
S. F., Cal., and 1310 S. Los Angeles St.,
L. A., Cal. W. F. Kenney, 68 First St.,
Portland, Ore. Chandler-Dunlop Co.,
Seattle, Wash.



The Most Remarkable Top Material Yet Produced

DRIDEK with its leather finish will not chafe, crack or blister—and holds its color right through to the cloth lining.

A **DRIDEK** Top is a credit to any car

Special **DRIDEK** Colors

Battleship Gray
Maroon, Olive Green
Tans, Brown
Olive Drab Khaki

Send for samples and prices—**today**

L. J. Mutty Co.

Boston, Mass.

SCOVEL IRON STORE CO.

PACIFIC COAST AGENTS

SAN FRANCISCO AND LOS ANGELES
CALIFORNIA



San Francisco, Cal.—Following the recent assumption of the Columbia car agency by the Harrison Motor Car Co., George Peak has been placed in charge of the retail sales for the new addition, and B. N. Taylor of the wholesale distribution.—R. W. Wittchen, connected for years with the Firestone Tire & Rubber Co., of Akron, O., has opened a Goodyear Truck Tire Service Station at 655 Geary St. under the name of Columbia Garage.—The Peacock Motor Sales Co., Chandler dealer, has taken a lease upon a one-story building, with mezzanine floor, to be erected on the southwest corner of Post and Franklin Sts.—The Pryor Auto Accessories Co. has opened new quarters at 45 Fourth St.

Modesto, Cal.—Howard W. Cowell, manager of the W. J. Benson Co., of Stockton, Maxwell dealer, has opened a branch agency here.

Coalinga, Cal.—The Pleasant Valley Motor Car Co., capitalization \$25,000, \$4,000 subscribed, has been incorporated by C. E. Aupperle, W. G. Sickie and Wade H. Lisle.

San Mateo, Cal.—Morton & Beer, Ford agents, have added on the Republic truck agency.

Santa Maria, Cal.—A Chandler and Marmon sales sub-branch has been opened here by C. A. Maino, agent for these cars in San Luis Obispo.

Burlingame, Cal.—The Burlingame Garage has taken the Dodge car agency.

Colusa, Cal.—J. D. McNary & Son have taken the KisselKar agency.

Wallace, Ida.—John Hayes, of the Kelly Garage, has taken the Shoshone county agency for the Velie car.

Walla Walla, Wash.—The Rickard Wheel Co., which will manufacture a wheel to be used without pneumatic tires, springs being set around the hubs, has been incorporated by L. J. Rickard, the inventor, R. E. Shepard and E. W. Benson.

Portland, Ore.—The Roberts Motor Co., Republic truck dealer, has moved into its new building on lower Park St.

Van Nuys, Cal.—The Willys-Overland agency for the San Fernando Valley district has been taken by L. Greenberg.

Portland, Ore.—D. F. Bachellor, recently of Spokane, Wash., has been appointed manager of the commercial car department of the Oregon Motors Co.—The Pacific Tire & Rubber Co. has taken the agency for the I. L. C. automobile lens in Oregon and the Columbia river counties of Washington.—The Manley Auto Co. has taken the agency for the Graham Bros. one- and two-ton truck attachment in Oregon and southern Washington.

Made from
Oil-Tempered
Spring Steel Wire

PATENTED MARCH 26, 1918

They Remove
Carbon Where
Others Will Not

Cut out experimenting—get down to business. Why not own a set of **FLEXIBLE CARBON SCRAPER**? They are the only scraper on the market that will do a satisfactory job without taking the motor to pieces. Compounds are dangerous. All good mechanics advise scraping carbon. Over 100,000 sets now in use by Auto Mechanics.

Ask Your Dealer or Write
Flexible Carbon Scraper Co. 1421 W. Washington St. Los Angeles, California



Two Plug Ignition

Ordinary Plug SU-DIG Plug To mag. or battery system

**MORE POWER
GREATER MILEAGE**

DO YOU UNDERSTAND TWO PLUG IGNITION—the system that ignites the gas at two opposed points at once? This burns the mixture completely and almost instantly; increases power and gasoline mileage; saves fuel and lessens carbon accumulation and spark manipulation. SU-DIG Series Spark Plugs added to the plugs now in your engine, give Two Plug Ignition. A wonderful improvement in the running of your car. No change in present system required. Write for free booklet, "How to Get More Power." If your dealer does not handle SU-DIG Series Plugs, write Chanslor & Lyon Co., San Francisco, Los Angeles, Fresno, Oakland, Seattle, Portland, Weinstock-Nichols Co., S. F., Los Angeles, Oakland. Superior Motor Power Co., 38 Irving Place, N. Y.



HARROUN

A car of popular price, designed by Ray Harroun, in which a new type of four-cylinder motor develops revolutionary power and efficiency.

Harroun Motors Corporation

General Offices and Plants, Wayne, Mich.

"The Light That Shows the Road"



IMPROVED SWITCH

Cord Attachment
Patented
Regulating
Dustproof
Waterproof
Bracket

These are the distinctive features of the NEW MODEL

S & M SPOT-LITE

Ask your dealer to show you the new model S & M Spot-Lite

S & M LAMP CO.

117 West 36th Place Home 25413 Los Angeles, Cal.



88 Manufacturers

Give their cars the "Vital Spark" through

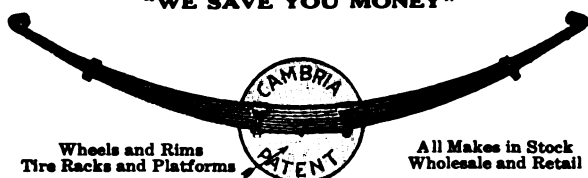
AC *The Standard Spark Plug of America*

Dependable at all speeds. The Trade Mark—"AC" is burnt into the porcelain

Champion Ignition Company
Sole Manufacturers Flint, Michigan

Main 1076 **CAMBRIA SPRING CO.** F 5233

Incorporated
"WE SAVE YOU MONEY"



Wheels and Rims
Tire Racks and Platforms

All Makes in Stock
Wholesale and Retail

AUTO AND TRUCK SPRINGS

Demountable Rims Sold and Applied
Spring Steel Bumpers

SPRINGS REPAIRED, FORGINGS AND FRAMES STRAIGHTENED

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Office: 916-918 So. Los Angeles Street

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(Coal Oil)

One Mile on Kerosene Costs Less than $\frac{1}{2}$ cent
One Mile on Gasoline Costs From $1\frac{1}{4}$ to $1\frac{1}{2}$ cents

BUY A DETROIT KEROSENE EQUIPMENT

Save 60% Price of Equipment \$25 f. o. b. Detroit

30 days Trial or MONEY BACK — ACT PROMPTLY!
These are days of strict economy

DETROIT KEROSENE CARBURETOR CO.
KRESGE BLDG. DETROIT

Department 16

A P E X Motor Oils

THE HIGHEST POINT OF EFFICIENCY

Gasoline "with the Punch"

PUENTE OIL CO.

Oldest Refiners and Producers on the Coast





Clydesdale

MOTOR  TRUCKS

Sturdy, strong and powerful enough to meet the stringent demands of war. Economical, dependable and light enough to more than profitably satisfy America's masters of commerce. Every inch of the Clydesdale bespeaks dependable performance under all conditions. Capacity up to five tons. Ask our dealer to demonstrate and explain Clydesdale's exclusive features.

THE CLYDE CARS CO., Clyde, Ohio

Give 'em air



Tire insurance for one dollar



The first question the tire adjuster will ask is: "Have you kept your tires inflated to the pressure we prescribe?"

If you haven't—and the condition of the tire will show whether you have or not—he will allow nothing for their premature destruction or blow-out.

Your tires will not stand up under the weight of your car unless you fill them to the requisite air pressure.

They will not last if you run them underinflated.

Test your air pressure daily with a

Twitchell Air Gauge

AND SAVE YOUR TIRES

Price \$1.25 THE TWITCHELL GAUGE CO.,
1214 Michigan Avenue, Chicago

Seattle, Wash.—The Sunset Motor Co., dealer for Cadillac and Hupmobile cars, will occupy, some time in March, its new three-story building at Broadway and E. Union St.; dimensions are 85x140 feet and construction is of pressed brick and terra cotta finish.—The Northwest Radiator & Fender Works has occupied a new two-story building at 1406-8 Broadway, providing 14,000 square feet of floor area.

* * *

Long Beach, Cal.—C. B. Bellows, of the Ocean View Garage, has added the Hudson line to the Dodge agency which he already has handled for some time.—John O. Rankin, Buick dealer, has added the agency for the Cadillac.

* * *

San Diego, Cal.—The Auto Shop has become city distributor for Republic tires and tubes.

* * *

Santa Monica, Cal.—The Santa Monica Garage has taken the Overland and Willys-Knight agencies for the whole upper Santa Monica Bay district, including Santa Monica, Venice, Ocean Park, Palms, Culver City and Sawtelle.

* * *

Fresno, Cal.—The Tire Construction Co. of Los Angeles, has opened a branch here in charge of Joseph Watkins.—R. N. Hollingsbery will have charge of the new local branch opened here by the Superior Motor Car Co. of Stockton, Saxon dealer.

* * *

Oakland, Cal.—S. A. Corgiat has been appointed Alameda and Contra Costa county agent for Republic tires.—The Lincoln Garage, 4011 E. 14th St., will handle the King car agency in this section of the state as sub-agent to the Leach-Frawley Motor Co., of San Francisco.

* * *

Long Beach, Cal.—The California Battery & Ignition Works has been opened here by Harold Leedom.

* * *

Pasadena, Cal.—The Tire Shop has been opened here by E. D. Nelson and W. J. Biele, who will do vulcanizing and sell Republic tires.

* * *

North Yakima, Wash.—Fred Chandler, Ford dealer, with branches at North Yakima, Toppenish and Sunnyside, has taken the distribution of Truxton truck attachments.

* * *

Spokane, Wash.—Peterson & Cartmell, who recently took the Inland Empire agency for the Harroun car, have located in their own building at Second and Washington Sts.—W. C. Garbe has appointed C. C. Hurley sales manager for the W. C. Garbe Co.—The Melcher Supply Co. has taken the Gates Half-Sole tire agency.

* * *

Waterville, Wash.—The Waterville Auto Co. has taken the Oldsmobile agency for Douglas County.

* * *

Tacoma, Wash.—The Commercial Auto Co. has been named agent for Perfection tires in Tacoma and Pierce county.—The Federal Tire Sales Co. has been organized by Walter E. Cady, Clarence J. Messenger and C. E. Murray; sales rooms have been opened at 953 Market St.—The Mueller-Harkins Co., handling Buick cars and GMC trucks, has leased the new three-story building to be erected on Broadway; it will cost about \$35,000 and will have 27,000 square feet of floor space.

HAVE YOU A MOTOR CAR? LISTEN!

See that groove controlling the oil. The groove full of oil forms a dam. Gas cannot get down, surplus oil cannot get up. That's why motor has more power, no carbon.

ISN'T THAT A REASON?



Representatives Write for booklet B.
H. G. Paro, 1414 S. Michigan Ave., Chicago; J. W. Van De Grift, 627 Charles Bldg., Denver; The Gavin-Williams Co., 1300 5th St., San Diego, Cal.; Chamberley & Sons, Nashville.

AUTOMOBILE ACCESSORIES CO., Baltimore, Md.

INTER-STATE

The best light car on the market today. Economical in every way, and tremendous Power. Once an Inter-State owner always an Inter-State owner.

WRIGHT MOTOR CAR CO.
1001 SOUTH HOPE ST.
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PHONE: Main 4062

U.S. SPRINGS
AS GOOD AS THEIR NAME

AUTO AND TRUCK SPRINGS

WHEELS, BUMPERS FORGINGS

Wholesale Retail

UNITED STATES SPRING CO., Inc.
Successors to A. & F. SPRING CO.,
1120-22 South Los Angeles Street, LOS ANGELES.

BE UP-TO-DATE ON TIRE CARRIERS

SLY INTERCHANGEABLE PATENTED

FORD

The strap kinds are obsolete and unsightly. The Sly interchangeable—Ford or Chevrolet quickly—neatly does the trick—take any casing or demountable—cost no more. Beware of imitations. If your Jobber doesn't list, write us for complete catalogue—of real Carriers and "Better Springs."

NEW ERA SPRING & SPECIALTY CO. 1190 Hamilton Ave., Grand Rapids, Mich.

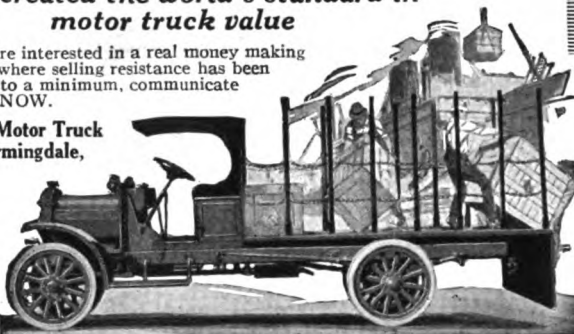
THE FULTON TRUCK

1½ Ton Capacity

Has created the world's standard in motor truck value

If you are interested in a real money making agency where selling resistance has been reduced to a minimum, communicate with us NOW.

Fulton Motor Truck Co., Farmingdale, L. I., N. Y.



Save the Nation's Gasoline with the

SUNDERMAN \$6

Vacuum Carburetor

This price maintains on Ford and Metz models
Other cars \$8 and \$10, depending on fittings necessary

This perfect carburetor will save you, no matter what your car, from 30 to 50% in your gasoline consumption. At the same time it will give your motor power, speed and flexibility beyond your fondest hopes.

It's your duty to your country to save gasoline when you can. It's a dealer's duty to promote the sale of an instrument that will cheapen the cost of running a car.

Send in your orders now—Fall is a big carburetor season

SUNDERMAN CORPORATION
17 Chambers Street (Dept. C) NEWBURGH, N. Y.
Western Office: 408 Kresge Bldg., Detroit.

"Brains In the Rear Axle"

BAILEY

Non-Stall

DIFFERENTIAL

Bailey Non-Stall Differential Corp.
1124 Michigan Avenue Chicago, Ill.

PRESSED STEEL PARTS FOR AUTOMOBILES AND TRUCKS

ESTIMATES CHEERFULLY FURNISHED

The Bossert Corporation UTICA NEW YORK

WHY NOT

'phone for HUGHES when you need first-class publicity or commercial PHOTOGRAPHS in a hurry?

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LOS ANGELES WAREHOUSE COMPANY

MAKES A SPECIALTY OF **AUTOMOBILE STORAGE**

CARS UNLOADED DIRECTLY INTO WAREHOUSE

316 COMMERCIAL STREET
A 4727, Main 4767

Briscoe Dealers Report Steadily Climbing Sales

And it is only natural that they should. For the Briscoe is the right car at the right price. The Briscoe combines the most wanted motor car features—utility and service—proved economy—good-to-look-at qualities—at the surprisingly low price of \$825.00.

75% to 150% Greater Business

Already Briscoe dealers report greater Briscoe demand than ever. From coast to coast come predictions of 75% to 150% increased Briscoe sales in 1918.

Have you analyzed 1918 conditions? Have you reasoned the thing out? Have you considered the sales possibilities the Briscoe presents in your territory.

A complete line—seven distinctive models, including the sturdy one-ton Briscoe truck and the stylish Briscoe Sedan. Each with the famous half-million dollar motor. Each with the many Briscoe extras. Each with typical Briscoe ultra comfort—economies—super-fine finish.

And each 99% built in the Briscoe ten fine factories at Jackson, Mich.

Here is real opportunity if your territory is open. Write for complete information.

BRISCOE PACIFIC COMPANY

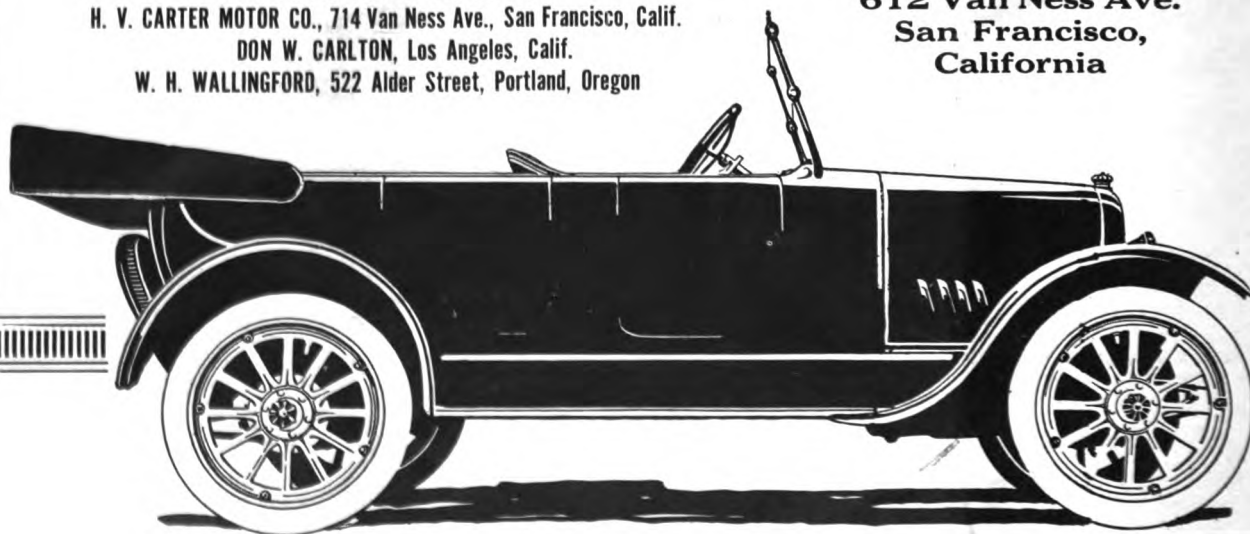
COAST DISTRIBUTORS

H. V. CARTER MOTOR CO., 714 Van Ness Ave., San Francisco, Calif.

DON W. CARLTON, Los Angeles, Calif.

W. H. WALLINGFORD, 522 Alder Street, Portland, Oregon

612 Van Ness Ave.
San Francisco,
California




BRISCOE \$825

THE CAR WITH THE
HALF-MILLION DOLLAR MOTOR

Motor West

THE MOTORING AUTHORITY OF THE PACIFIC COAST



These three letters marked on a ball bearing are a guarantee of satisfaction. Such bearings are used wherever a reputation is to be maintained and where quality and service are a requisite.

SKF BALL BEARING CO.
HARTFORD, CONN.

SKF BALL BEARING CO.
of California, Inc.
San Francisco

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Lithe, Sinewy, Enduring United States 'Royal Cord' Tires

To know the construction of '*Royal Cord*' Tires is to know why they have held their supremacy.

The many layers of many powerful little cords in these tires,

—like the lithe, sinewy, enduring muscles of a physically perfect man,

—give them the elasticity, the resiliency, the endurance which is so exclusively theirs.

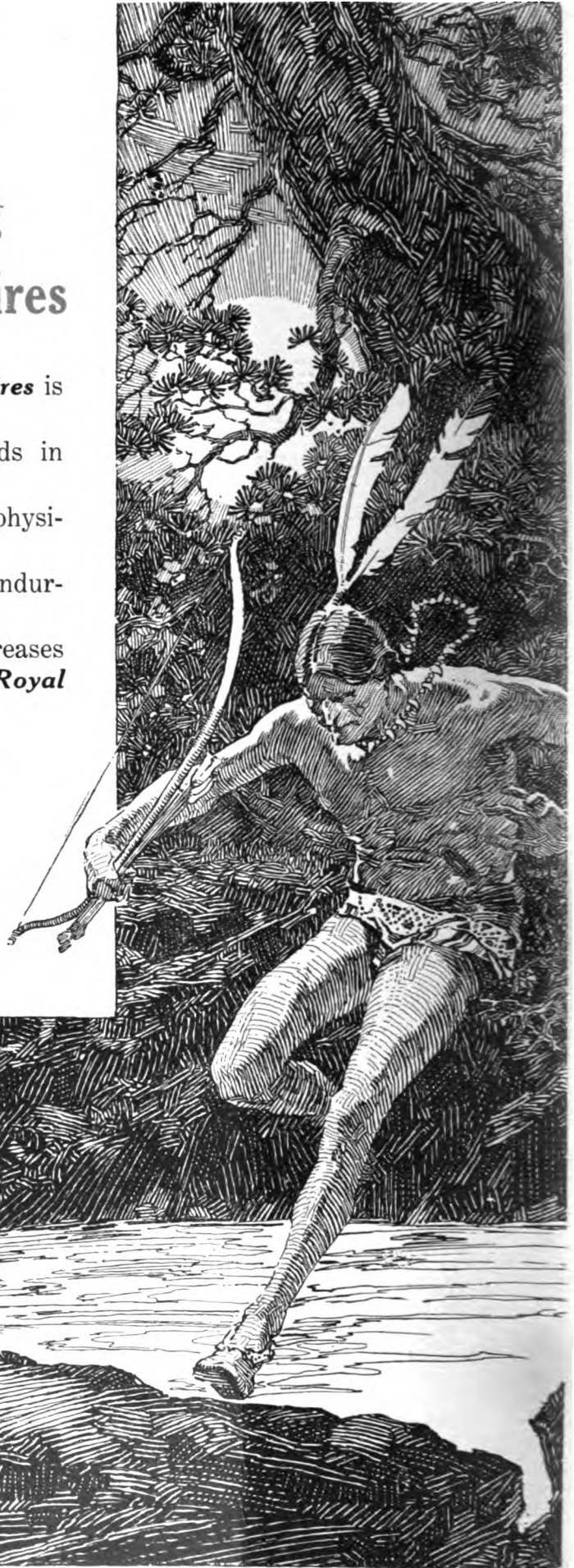
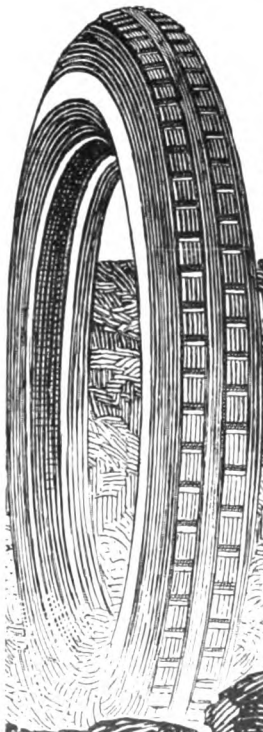
Their vast, and still growing vaster, sales increases are the proof of what wise motorists think of '*Royal Cord*' Tires.

United States Tires Are Good Tires

'*Royal Cord*' '*Nobby*' '*Chain*' '*Usco*' '*Plain*'

Also Tires for Motor Trucks, Motorcycles, Bicycles and Aeroplanes

United States Tires and Tire Accessories
have all the Sterling Worth and Wear that make
United States Tires Supreme.



Mention 'Motor West,' Please, When Writing to the Advertiser



Ford Owners!

That Grabbing—Slipping—Chattering no longer is necessary

Cork Insert Transmission Linings end it. They eliminate the jerk and jar, the slipping and jumping, the rattle and chatter, the shaking loose of nuts and bolts, the severe wear and tear on engine differential and other parts.

Cork Insert Linings enable you to start and stop as smoothly and quietly as with a big car. The Ford picks up with gratifying smoothness and glides to a quick, gentle stop with little pressure on the pedal.

\$3
per set
of 3

ADVANCE

CORK INSERT

TRADE MARK REG. COPYRIGHTED 1917

TRANSMISSION LININGS FOR FORDS

stop the slipping through the use of buttons of cork—a patented feature no other lining can have. Cork never gets hard or polished. It's hard, polished linings that cause all the trouble in ordinary transmission linings. Cork Insert Linings don't slip—don't grab. They make the smoothest, safest, most economical linings for Ford transmission ever devised. They give a better driving, better braking car, and a lining that outwears ordinary linings three to one.

Ford Motor Kept Cool—Fan Kept Fanning by Fan Belt that Doesn't Slip

When the Ford fan belt runs as it ought, the Ford motor is kept cool and overheating is avoided. But the fan can't fan properly if the belt is slipping and lays down on the job. The slippage of the ordinary Ford belt runs as high as 25% to 50%.

ADVANCE

DEALERS—Order From Your Jobber!

FAN BELT FOR FORDS

stops slipping. The buttons of cork, unaffected by water or oil—grease or dirt—grip at the first turn of the motor and keep the fan fanning. Cork Insert Fan Belts outwear several ordinary fan belts and do the work better as long as they last.

Order at least a dozen sets of Cork Inserts next time your jobber's salesman drops in. Cork Inserts mean better profits for you—better service and satisfaction for the user. They are the liveliest line in the field. Strongly advertised. Your customers know about them. Stock them and they'll move fast. Send coupon if your jobber can't supply you.

Advance Automobile Accessories Corp.
Dept. C-18-1 56 East Randolph Street, Chicago
PACIFIC COAST SALES OFFICE, LEO STEIN, Manager
214 Kohl Building, SAN FRANCISCO, CAL.

For big
Cars!

Insures a safe
brake all the time

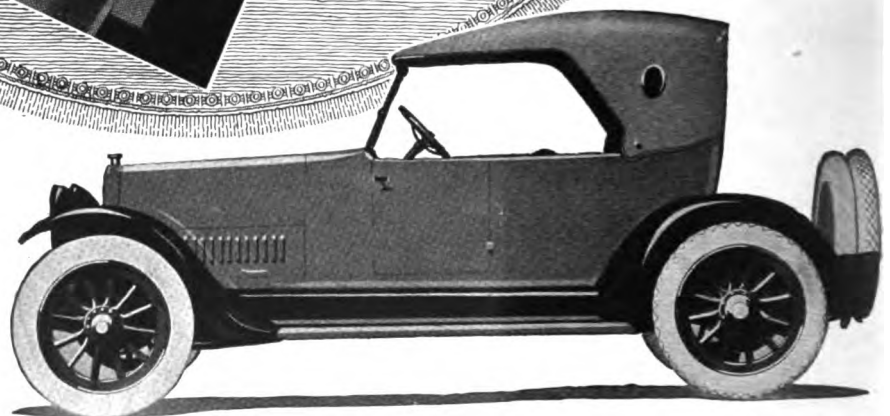
ADVANCE CORK INSERT BRAKE LINING

Cork Insert Brake Lining has the highest coefficient of friction of all linings—less pressure needed on pedal—unaffected by oil or grease—no grab, slip or squeak—wears longer and insures safe brake to the last mile.

KISSELKAR

The
ALL-YEAR
Car4 Passenger
Sedané

Roomy
Enough
for Every
Feminine Use



PLENTY of leg and elbow space that makes shopping, calling, city driving or country touring in the *Sedané* a pleasure. Its exclusive construction features, created by Kissel, fulfil three functions—a closed coach for winter—a semi-open car by dropping all side windows—a roofless touring car for summer.

The ALL-YEAR Top is built in, not on; no visible fastenings—no rattles or draughts, entirely removable.

The Hundred Point Six

Its proven Hundred Quality Features give mechanical efficiency, brilliant road performance, economy, quietness.

DEALERS—We have some splendid territory in Oregon, Washington and California open to reliable dealers, where the ALL-YEAR Sales of the ALL-YEAR Car insure a permanent profitable business. Write, wire or see us immediately.

PACIFIC KISSELKAR BRANCH

W. L. HUGHSON, President

SAN FRANCISCO—VAN NESS AT GEARY

Largest Motor Car Dealers on the Coast with Branches at

OAKLAND

FRESNO

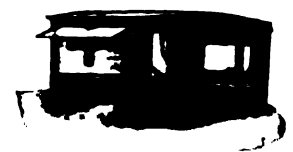
LOS ANGELES

SAN DIEGO

SEATTLE

PORTLAND

Mention "Motor West," Please, When Writing to the Advertiser



With ALL-YEAR Top—windows raised or lowered at will.



Windows up—complete protection in bad weather.

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Springs without shackles, bolts or oil cups

Double the cost of ordinary springs—EVERY LEAF of pure triple heat-treated vanadium steel; guaranteed not to break or to creep. 48 wearing parts eliminated.

ARMLEDER

Motor Truck

2 Ton—WORM DRIVE—3½ Ton

4 more big EXCLUSIVE improved features:

RADIATOR that never leaks or wears out.

RADIUS RODS that prevent universal joint trouble.

FRAME that cannot sheer out of square.

WHEELS that do not break down. Features not possessed by any other Motor Truck in the world.

To a few more Dealers we offer big proposition.

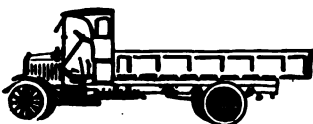
ARTHUR H. HERTZ

112 MARKET ST., DEPT C, SAN FRANCISCO.

In Charge of Western Sales

ARMLEDER MOTOR TRUCKS.

Manufactured by
THE O. ARMLEDER CO.
Cincinnati, O.



Prevents Ford Rear Axle Trouble



\$3.75

Exact Replacement

Your Ford need not be "laid up" for rear axle repairs a single day this year if you replace plain thrust washers (parts 2528-9) at gear side of differential with a Bailey Ball Thrust. Because plain washers having a friction-creating sliding contact wear thin, cause gears to get out of mesh, become noisy and break—but a

BAILEY BALL THRUST

will not wear because it contains eighteen ¼-inch micro-chrome steel balls that form a frictionless rolling contact—hence no wear, and they are bound to keep gears in perfect mesh, make them run smoothly, quietly and without power waste. No noisy gears, no stripping, no frequent repair bills, in fact, smooth, all-power-possible energy from your axle with a Bailey.

ALL OTHER CARS

Except the Ford and some Chevrolet 490's are equipped with ball or roller bearings to take this gear thrust. Large corporations everywhere operating fleets of Fords are installing Bailey Ball Thrusts, thereby adding power and saving fuel and repair costs.

Be forehanded—see your dealer-repairman today. A mere explanation of the outstanding features of this bearing will convince you it is something your good judgment and purse demand.

GUARANTEED



Left Side of Differential.

Bailey Ball Thrusts, made of the finest materials, heat treated and ground, have a capacity for six times the maximum thrust (pressure), and so we unqualifiedly guarantee every bearing to "stand up" under all strains and hardships.

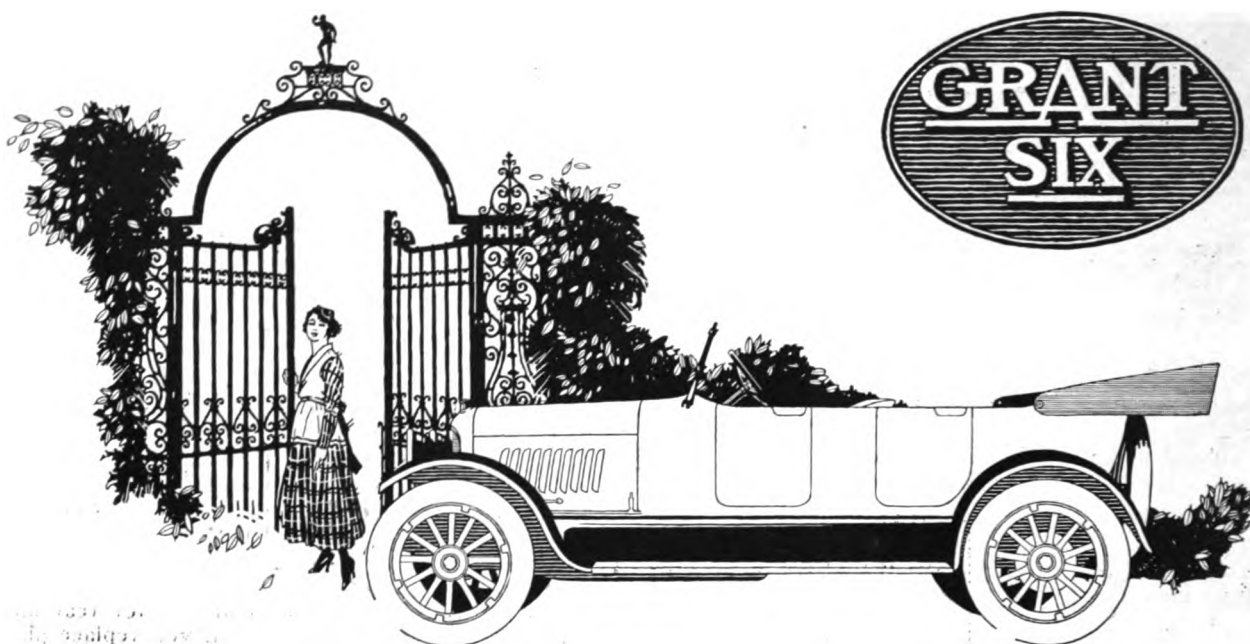
Go to your dealer—have him install a Bailey. Price, \$3.75.

Dealers, repairmen and garagemen, write your jobber. Be ready—national advertising will send customers to you.

GEO. D. BAILEY CO.

1116 S. Michigan Ave.

Chicago, Ill.



Exceptional Beauty and High Economy

In giving the new Model G Grant Six its new and pleasing lines and in refining the car mechanically, Grant designers and engineers believe they have produced what is unquestionably the finest car of its size and price ever built.

In this new model the splendid Grant Six engine reaches the highest plane of efficiency and economy. In power, in flexibility, in responsiveness, it is not excelled by any six in a car of comparable price.

The sturdiness of the Grant Six has been repeatedly proved. In 1917 and again this year it was the first car over the Sierras from Sacramento to Lake Tahoe.

The remarkable economy shown by owners averages 20 miles to a gallon of gasoline and 900 miles to a gallon of oil, is probably not equalled and certainly not excelled by any other six.

This economy, the price and the dependability of the car itself, make the Grant Six one which the spirit of the times demands. No car sold in the West is more deservedly popular.

Price \$1055 f. o. b. Cleveland

GRANT MOTOR CAR CORPORATION

CLEVELAND

MOTOR West

THE MOTORING AUTHORITY OF THE PACIFIC COAST

VOL. XXVIII., No. 11

MARCH 15, 1918

\$2.00 PER YEAR

FORD MUST PAY CAL. FRANCHISE TAX

Supreme Court of United States Rules Against Company in Suit to Restrain Golden State.

The Ford Motor Co., of Detroit, has lost its suit before the Supreme Court of the United States to restrain the state of California from collecting a franchise tax of \$24,000 on business done in the state during 1915 and penalties imposed by the state amounting to \$3,000, a total of \$27,000. The contention of the Ford company that the tax was excessive was dismissed and now the state has begun suit at Sacramento to compel payment of the tax and penalties. According to the report filed with the California state board of equalization in March, 1915, the company transacted \$7,000,000 worth of business in the state in the preceding nine-months' period. The value of real and personal property in the state was stated at \$576,930. When the Ford company refused to pay the tax, Hiram W. Johnson, then governor, issued a proclamation depriving it of its right to transact intra-state business and forfeiting its charter.

Gersix Truck Has Good First Year.

Reflecting a successful first year of existence, the Gersix Motor Truck Co., of Seattle, Wash., expects to have an output of 250 complete trucks during the present year. Distribution is also mapped out for the Gersix in Portland and Spokane.

Handles Utility Trailers in S. F.

M. L. S. Mitchell is manager of the San Francisco Trailer Co., 1226-30 Mission street, San Francisco, which makes a specialty of two and four-wheel trailers and semi-trailers. The company represents in Northern California the Utility Trailer, manufactured by the Los Angeles Trailer Co.

C. P. Henderson to Reside Here.

C. P. Henderson, sales manager of the Cole Motor Car Co., Indianapolis, has let it be known that California is to be his home for an indefinite time. San Francisco, or the neighboring suburban towns meets most favor in his estimation as a dwelling place. His belief in Pacific Coast prosperity has already been demonstrated when he arranged with the Cole factory to increase the allotment made for the California territory.

H. L. Arnold Takes Republic Truck.

Harold L. Arnold has taken the distributing agency for the Republic truck in Southern California and Arizona, succeeding D. F. Poyer, whose activities have been closely connected with Republic success on the Coast for several years. Recognition by the Republic Motor Truck Co., of Alma, Mich., of Poyer's value to its organization has taken shape in his appointment as vice-president and general manager of the newly formed Republic Motor Truck Co. of California. The new company will assemble Republic trucks in its Los Angeles plant to supply the demand west of the Rocky Mountains. The Harold L. Arnold Co. has become widely known throughout Southern California as distributor of Hudson and Dodge cars.

John W. Bate in Southern California.

John W. Bate, whose name has for years been synonymous with the engineering design of Mitchell cars, has followed up his recent resignation from the Mitchell factory with a vacation trip to Southern California. More specifically his place of sojourn is now Arrowhead Springs, the well-known health resort.

Smith, of Standard Tire, a Visitor.

Charles P. Smith, sales manager of the Standard Tire & Rubber Co., Cleveland, O., is making a tour of the Pacific Coast territory, during which he will visit Cleveland Standard tire dealers in the important cities.

CHEVROLET BUYS DURANT HOLDINGS

Part of Plan of General Motors to Absorb Chevrolet Co. of Michigan —Norman DeVaux in Control.

In a transaction involving close to \$1,000,000, the Chevrolet Motor Car Co. of California, with an assembling factory at Oakland, Cal., has purchased the entire holdings of W. C. Durant in the Pacific Coast company. The result of the transfer leaves control of the Oakland plant in the hands of Norman DeVaux, president, and R. C. Durant, general manager and son of W. C. Durant.

The deal, vital to the Pacific Coast, is in reality but a detail in the plans, recently announced, of the General Motors Co. to purchase and include the Chevrolet Motor Co. of Michigan as a division of the group. Resulting also from the acquirement of W. C. Durant's interests on the Coast, the capital of the Oakland company has been increased to \$1,500,000, paid in.

Hurd Heads White Sales.

R. S. Hurd has been appointed sales manager of the White Automobile Co. The new executive first entered the White organization as a salesman and later was made sales manager of the wholesale department of the White branch in San Francisco. Thereafter the steps to his present important position were the appointments as Portland, Ore., branch manager and soon after manager of the White Company's wholesale business for the entire Pacific Coast.

L. A. Standard Dealer Moves.

Justy J. DeVaux, of Los Angeles, Cal., distributor of Standard motor trucks has leased new quarters at 1017-19 S. Olive St. The company will vacate its present quarters at 1144 S. Olive St. by April 1.

WEST BIG TRUCK MARKET—COCHRAN

Western Sales Manager of the United States Truck Co. Finds Coast Conditions Ripe for Big Business.

W. B. Cochran, western sales manager of the United States Motor Truck Co., of Cincinnati, has found since his return to his office at San Francisco from the national shows, that the farmers of all of the Far Western states are ready to purchase motor trucks. Mr. Cochran says that the need for motor trucks in the transportation of products to the market is very pronounced, and that prominent among the many districts which require truck transportation there are 23 counties of northern California that are particularly urgent, and which are calling upon the manufacturers to supply the trucks right now. California is supplying to the country at large produce of every character, and material for war, and in every field is doing an enormous and profitable business, requiring rapid transit of every character. From California there is being exported to the country at large, and foreign countries, butter, fruit, lumber, wood, hay, grain, beans, oil, gasoline, canned fruits, rice, barley, almonds, grapes, vegetables, berries, magnesite, minerals, oranges, corn, melons, potatoes, poultry, eggs, hops, stock, and many other products which must be marketed.

Railroad transportation in the Far West is as difficult as in other sections, except for through traffic. The car shortage and delays in freight have brought about a condition, and railroads refuse short hauls and part carloads. The farmers are suspicious of delays, and oftentimes suffer from non-deliveries of their product to market, and are naturally looking to the motor truck, which, in conjunction with the splendid roads of the West, provide the means to reach the market and points of transportation. Mr. Cochran immediately upon his return to California found a ready market for trucks, and has written the United States Motor Truck Company of the wonderful outlook all up and down the Coast. All farmers are prosperous, high prices are being received, and every line of business is seeking the easiest means of transportation as a relief for existing difficulties. In the past but a small percentage of the farmers have utilized trucks. As a consequence, dealers all through the territory west of Salt Lake City are being truck agencies, and it is esti-

mated that there will be fully 10,000 trucks sold in California alone in 1918, according to the statements of Mr. Cochran, after a careful investigation.

Made Leach-Frawley Asst. Mgr.

L. A. McConnell has been named assistant manager of the Leach-Frawley Motor Co., of San Francisco. The appointment really involves his transfer from the Leach Motor Car Co., of Los Angeles, where he acted in the same capacity.

Burdette with Hercules Sales Force.

F. H. Burdette, formerly Pacific Coast manager of the Four Wheel Drive Co. of Clintonville, Wis., and before then Eastern representative of the Stewart truck, has joined the new



F. H. BURDETTE
Who has Charge of Hercules Truck Co. Sales on the Pacific Coast.

Hercules sales organization, and will have charge of Hercules truck sales on the Pacific Coast, where an aggressive sales campaign is in progress. The Hercules is built by the Hercules Motor Truck Co., of Milwaukee, Wis.

Rothweiler Sells Ford Agency.

H. N. Rothweiler, one of the largest of the eight authorized Ford dealers in Seattle, Wash., has sold his dealer contract to Alfred G. Ayerst, assistant manager of the Ford factory branch in Seattle. During the seven years he has handled the agency here Rothweiler has enriched his district by the sales of more than 4,000 Ford cars, but his interests in a separate manufacturing business have forced him to withdraw from the automobile industry.

Republic Branch Ideally Located.

The new Pacific Coast assembling branch of the Republic Motor Truck Co., recently opened in Los Angeles is ideally located with regard to power for manufacturing, labor and materials according to a recent announcement of W. A. Pritchard, manager of the Republic Co. Los Angeles. Pritchard says, will never know a shortage of workers. "In our own experience we have had our workmen in Michigan ask that they be given a chance to move to California and work for us there. We find here the ideal power of the country—hydro-electric power. This city has it right here and will have it for all time to come. Next, the hardwoods that are used in the making of automobile and trucks are to be had cheaper here than in the East. The hardwood forests of the Middle West are giving out under the big demands for railroad cars and motor vehicles and the virgin hardwood forests of the Pacific Coast, especially of Oregon are being drawn upon more and more each year. Soon the only remaining hardwoods will come from Central America and the Philippines. This will make the Pacific ports the gate for all hardwoods used in America."

Leach and Frawley Take Mitchell.

Distribution of the Mitchell car in both the Northern and Southern California territories, respectively, has been taken by the Leach-Frawley Co., of San Francisco, and the Leach Motor Car Co., of Los Angeles. Negotiations for the appointment of these two companies, closely affiliated through a common ownership, to handle the Mitchell were closed during the presence upon the Coast of C. W. Arthur, of the re-organized Mitchell Motors Co., Inc., of Racine, Wis., in company with Factory Representative McKelvey.

Salt Lake Would Tax Cars.

The proposal of the city commission of Salt Lake City, Utah, to levy a city tax on all passenger cars, ranging from \$5 to \$10, according to the weight of the cars taxed, has met with scant welcome from the 6,000 car owners in the Utah metropolis. This city tax would of course in no way effect the present state personal property tax and annual registration fee.

Master Truck in Portland Territory.

The Master truck will be handled throughout Oregon and Washington by Portland Tire & Truck Co., Portland, Ore. The truck agency will be conducted in conjunction with a jobbing business in Republic solid and pneumatic tires.

Mathewson Concentrates on Wholesale

The retail selling of Oakland, Allen and Davis cars in Northern California has been abandoned by the Mathewson Motor Co., of San Francisco, in order to concentrate all its activities on the wholesale distribution of these cars. For the Oakland wholesale the company has allotted to itself the surrounding nearby territory included in San Francisco, San Mateo and Marin counties. The Davis car will be wholesaled to dealers throughout Northern California and Nevada. In his connection with the Allen Motor Sales Co. Mathewson will handle the Allen car through a San Francisco retailer to be chosen.

Master Truck Agent for South.

The Sherlock-Keene Motor Truck Co. has been formed in San Diego to act as distributor for Master trucks throughout the Southern California and Arizona territories. Alfred D. Robinson is president of the new company. George H. Sherlock, vice-president and general manager; and Guy J. Keene, secretary and treasurer. Master trucks are manufactured by the Master Trucks, Inc., of Chicago.

Runnels Strengthens Distribution.

The Runnels Motor Sales Co., of San Francisco, which acts as Northern California distributor for Oneida and Fulton trucks and Moline tractors, has greatly strengthened its distributing connections throughout the northern counties by the appointment of the Watts Truck & Tractor Co., of Sacramento, Cal., to handle Fulton and Oneida trucks. Under the contract the Sacramento firm has taken delivery of a car load of these makes of trucks and has undertaken to handle \$125,000 worth of trucks during the year.

Watt & Williams Take Ralston Sales.

Wholesale and retail sales of Ralston truck attachments, manufactured by the Ralston Iron Works, Inc., of San Francisco, will be handled by Watt & Williams, of the same city, thereto acting as retail agents for the Ralston product. In this connection Watt & Williams will also be exclusive distributors of Ralston attachments for Ford cars and all other makes of cars and of parts therefor. A very attractive dealer proposition will be featured in the company's distributing campaign and prompt delivery of attachments will be secured.

Builder of Show Decoration Praised.

In connection with the second annual Pacific Automobile Show at San Francisco recently high praise is due Henry Vowinkel, of the Decorative Construction Co., 348-50 Hayes St., San Francisco, for the efficient man-

ner in which he carried out the construction of the elaborate scheme of decoration designed by the well-known Herman Rosse. Vowinkel also carried out the same work for the first Pacific Automobile Show, February, 1917. In connection with the Panama-Pacific International Exposition of 1915 he built "Yellowstone Park" for the Union Pacific Railroad and furnished the decorative material for "Creation."

Collins, Cadillac Head, in California.

R. H. Collins, president of the Cadillac Motor Car Co., has forsaken Detroit temporarily for a short visit to California.

Scovel Iron Store Branch in L. A.

For the accommodation of its large and rapidly-growing list of customers in Southern California the Scovel Iron Store Co., of 754-56-58 Howard street, San Francisco, recently opened a branch at 1401-3-5-7 Main street, Los Angeles, under the management of J. Dwight Scovel, son of George S. Scovel, president of the company.

This building, which is of brick and steel fire-proof construction, two stories in height, is 75x150 feet in dimensions, and is admirably designed and located for the purposes of the business. An immense sales room occupies one-third of the ground-floor space, extending entirely across the Main street front, while immediately in the rear is the capacious store-room, with a complete stock of top and upholstery materials, top and body hardware, limousine fittings and mountings and a most complete line of automobile trimming hardware.

The Scovel Iron Store Co. is the Pacific Coast representative of the Pantasote Co., Jos. N. Smith & Co., Schwarz Wheel Co., Bridgeport Coach Lace Co., Zapon Leather Cloth Co., Perfect Window Regulator Co. and many other prominent Eastern concerns.

**HAROLD L. ARNOLD
DROPS DODGE CAR****Action Due to Expansion Necessitated by His Taking on Maxwell and Columbia and Republic Truck.**

The combination of Harold L. Arnold and the Dodge car agency for the Southern California territory has been severed recently as a development which accompanies the expansion of his activities to handle the Maxwell and Columbia cars through his subsidiary company, the Southwest Motors Co., Los Angeles, Arnold's activities has been closely linked with the Dodge since it entered the Southern California region three years ago, resulting in profit and success which has been notable even in the matter-of-fact prosperity of that exceedingly numerous and popular-priced car. The H. L. Arnold Co. still retains the distribution of the Hudson car, to which will be added the agency for the Republic truck.

Double Seal Ring Changes Location.

The Double Seal Ring Co., of San Francisco, manufacturer of Double Seal Piston Rings, has moved to larger and more central premises at 1124 Polk St. The company is conducted under the management of J. P. Quinn. The Los Angeles, Cal., branch of this company has been opened at 603 W. Pico St.

New Metz Dealer for South.

The Southern California agency for the Metz car, famous for its adherence to the friction-drive principle of olden days, has been contracted for by W. B. Rorick, with quarters at 999 W. Washington St. The Metz line includes a roadster and a touring car model.



LOS ANGELES BRANCH OF SCOVEL IRON STORES CO., OF SAN FRANCISCO

PLANNING FOR BIG TRACTOR TRIALS

California Tractor and Implement Association Preparing for Demonstration at Davis, Cal., April 17, 18, 19.

Plans for the big Tractor and Implement Demonstration and Power-Farming Exposition to be held on the University Farm at Davis, Cal., on April 17, 18 and 19 are progressing in a manner that indicates that this will be the biggest event of the sort ever conducted west of the Mississippi River.

At the annual meeting of the California Tractor and Implement Association, held in San Francisco last month, W. H. Gardner of the Yuba Mfg. Co., formerly vice-president of the association, was elected president; C. E. Witherell of the Samson Sieve-Grip Tractor Co., was elected vice-president, and G. M. Walker of the Holt Mfg. Co., was re-elected secretary-treasurer. At that meeting the association, whose membership includes practically all the tractor and implement manufacturers and representatives on the Coast, and under whose auspices the coming demonstration is to be held, voted an expenditure of several thousand dollars for an extensive publicity campaign.

More than forty tractors will take part in this demonstration on the University Farm. Behind them will be hitched plows, harrows, land levelers, and every other kind of tractor-drawn tool. The original plans for the demonstration, which provided for only a public demonstration of plowing, have been broadened by popular request to include work with harrows and other implements so that the show will have the widest possible educational value.

The demonstration has aroused a very wide interest, not only among the farmers and other tractor users of California, but also among those at more or less far-distant points. A number have indicated their intention to come to the University Farm Demonstration from Oregon, Utah, Nevada and Arizona.

It is generally recognized that the demonstration offers an opportunity to the individual to increase his personal profits and the efficiency of his work, as well as to perform a patriotic duty. President Wilson and the Secretary of Agriculture have repeatedly urged farmers to adopt methods that will decrease their costs and labor and insure maximum crops. Among the means recommended for this purpose, the tractor and tractor tools stand

foremost. The demonstration offers the farmer an opportunity to see just what the tractor can do, and to compare the various makes of tractors and tractor tools on the market.

The University of California has recognized the educational value of the demonstration and is doing everything within its power to co-operate with the tractor men and insure the success of the affair. It has proposed and will conduct scientific tests of the tractors that will assist the prospective purchaser to make the proper choice.

The Tractor Association has opened business offices in San Francisco in the Monadnock Building and has employed Eugene Smith as business manager for its demonstration.

Rand Re-Unites Jordan to Mercer.

The Jordan car in the Northern California territory has again been linked in the familiar combination with the Mercer car, resulting from the recent taking on of the Jordan line by C. D. Rand & Co., of San Francisco. C. D. Rand, head of the firm, took over the Mercer car distribution in the northern part of the state several months ago.

DuBroy Takes Nash Retail.

The DuBroy Motor Co., of San Francisco, Cal., has taken the distributing agency for the Nash car and Nash truck, with San Francisco and San Mateo counties as a radius of operations. The Pacific Nash Co., of the same city, hitherto exclusive Nash dealer, will confine itself to handling the wholesale Nash distribution for the Pacific Coast territory.

143 Oaklands for Washington.

Nation-wide congestion of railroad freight has failed to prevent the Oakland Motor Car Co., of Pontiac, Mich., from supplying its dealers with their allotments of cars. Oakland dealers in the state of Washington lately were rejoiced by the news that another train-load of double-decked automobile cars had left the Pontiac factory, carrying 175 Oakland cars, itemized as follows: 143 touring cars, 7 roadsters, 13 sedans, 11 roadster coupes and 1 town car. The shipment was destined for the North Pacific Oakland Co., of Seattle, Wash.

Apperson Dealer in Seattle.

The Apperson car has entered the Seattle territory, a region which has hitherto been dependent upon the Portland, Ore., agency which has been the large distributing agency for the Pacific Northwest. The Standard Garage, Inc., of which Samuel Inch is proprietor, has been appointed Apperson dealer in Seattle by F. L. Kimball, representing the Apperson factory.

Reliance Truck and Trailer Expands.

Joseph M. Litchfield, secretary and treasurer of the Reliance Truck and Trailer Co., Inc., of San Francisco, informs "Motor West" that the remarkable increase in business has necessitated removal to larger and more central quarters at 30 Eighth street. This company, of which J. R. Konetsky is president and general manager, manufactures trailers, truck attachments and tractors.

Bell Over L. A. Overland Branch Sales.

After having acted as special representative of Willys-Overland interests in California, Arizona and Nevada for a year, W. H. Bell has been appointed sales manager of the Los Angeles, Cal., branch of the Willys-Overland Co. of California. His appointment is the outcome of nine years' experience with the automobile industry.

Crossman Returns to L. A. Studebaker

A. W. Crossman has returned to Los Angeles as manager of the Southern California branch of the Studebaker Corp. L. A. Keller has been acting in this capacity since Crossman was called to the East and now himself will go to Chicago to fill an important position affecting all Studebaker branches.

Takes Grant Line for Washington.

The Grant car agency for the state of Washington has been taken by the Mitchell Motor & Service Co., of Seattle, Wash. Delivery and sales of 500 cars during the present year are stipulated in the agreement.

McPhail Adds Columbia to Stutz.

C. D. McPhail, manager of the Auto Rest Garage, of Portland, Ore., has taken the Columbia car for Oregon. The Columbia has already secured distribution in Los Angeles and Seattle and more recently in San Francisco. McPhail recently took the Stutz car agency for the same territory.

Heads Chandler Sales in Spokane.

Frank J. McDonald has been named manager of Chandler sales for the Culton - Moylan - Reilley Auto Co., Spokane, Wash.

Heads Savage Tire Home Branch.

L. S. Chamberlain has been appointed manager of the San Diego, Cal., branch of the Savage Tire Co., and will have control of sales throughout the territory south of San Juan Capistrano and east to Yuma, Ariz., a region made up of San Diego and Imperial counties. L. A. Milz, whom Chamberlain succeeds, has been transferred to the company's sales department at the factory in San Diego.

Ground for New White Home Broken.

As the next step in the decision of the White Auto Co., Los Angeles, to move from its present location in the North Alameda St. district down into the automobile center of the city lying south of Tenth St., ground has been broken for a new building at the southeast corner of Eighteenth and Figueroa Sts. The new home of White cars and trucks will be constructed of brick and concrete and will have dimensions of 98x155 feet.

Victoria Shuts Garages on Sundays.

Observance of the Lord's Day Act to the letter has been compelled in Victoria, B. C., beginning February 1, in accordance with the ruling of the local police commissioner. The sale of gasoline will be an infraction of the act, so that public garages must close their doors on Sundays henceforth.

Germond, of Chandler, Called to War.

F. R. (Jack) Germond, well known as sales manager for Earl V. Armstrong, Chandler car dealer in Los Angeles, has answered the call to the colors. As a result of persistent effort he succeeded in being accepted for the aviation department of the signal corps.

Takes Truxton for Oregon.

The Western Motor Car Sales Co., Portland, Ore., has taken the agency for the Truxton truck attachment for Oregon as territory.

Cal. Packard Sales Hold Good.

Earle C. Anthony, Inc., of Los Angeles and San Francisco, Packard car distributors, led all other sections of its class in the United States in the sale of Packard cars during December and January. The California organization was the only one that sold its full quota and in doing so it surpassed the requirements by 8 per cent.

Garford Agents in Spokane Region.

The Western Truck & Tractor Co. has been formed in Spokane, Wash., to handle Garford trucks and tractors in a sales territory taking in eastern Washington, northern Idaho and western Montana. D. E. Zent is president and George A. Sabourin, sales manager of the company.

Sutton Joins Chilcott, of Nash.

N. F. Sutton, formerly manager of the General Motors Truck Co., St. Louis, Mo., has resigned and has formed a partnership with W. K. Chilcott, of Portland, Ore., who has been for some time distributor of Nash cars and trucks in Oregon, Washington, Idaho, part of Montana and Alaska, and who was previously well known as former sales manager for the General Motors Truck Co., of Pontiac.

Comm'l Car Unit Head Here.

Fred M. Wright, sales manager of the Commercial Car Unit Co., of Philadelphia, visited San Francisco recently.

LICENSE FAILURE COSTS 25 PER CENT

California Motor Vehicle Department Announces Penalty to Be Imposed on Motorists Who Fail to Register.

Registrations for 1918 of motor cars and trucks in California reached 240,000 on Feb. 15, according to the recent announcement of P. J. Tehaney, in charge of the state motor vehicle department. As a stimulus to all delinquent car operators who have not as yet possessed themselves of 1918 licenses announcement is also made that the penalty for such neglect will amount to 25 per cent of the regular license fee.

There had been issued on the above date 228,600 operators' licenses, leaving an approximate total of 200,000 yet to be issued. The 1918 registrations show a gain of 25 per cent over those for last year.

The California state motor vehicle department had issued licenses for 240,359 motor cars and trucks on February 26, inclusive. On that date, also, there were 1,621 motor vehicle dealers in California. Total receipts from the licensing of automobiles, motorcycles, chauffeurs, automobile dealers and motorcycle dealers amounted to \$2,478,688.



"TROUBLE TANKS" NOW USED TO ESCORT CRIPPLED AUTOMOBILES TO GARAGE OR REPAIR SHOP.

Motorization is sweeping the country, and power is now being applied to cleaning up wrecks. An interesting demonstration of what amounts to a street or highway "tank" was given last week in Los Angeles when a big touring car was wrecked by an interurban train. The wrecking car of the Auto Service Association of California was called out and in three minutes from the time the car backed up to the demolished machine it was bowling merrily on its way to the garage with its prize in tow. The Auto Service Association of California was recently inaugurated in Los Angeles, affording a service to the motoring public of Southern California which acts as an insurance against automobile trouble of all descriptions. The advantages of such service, especially to those cars operated by the "lady of the house" is self-evident.

The service cards issued by this Association are of three classes: The first class, costing less than three cents per day, entitles the holder to road adjustments and tire service, not exceeding 60 minutes at any one time, and towing service for a distance not exceeding 50 miles from Los Angeles. Second class cards entitle the holder to the road adjustments and tire changes and towing service for a distance not exceeding 100 miles from Los Angeles, for which a charge approximating five and one-half cents a day is fixed. Third class cards entitle the holder to all of the above and also a towing service from any point in the State of California and the charge for these cards is approximately eight cents per day.

The Auto Service Association of California effects this service by means of a fleet of small cars used as service patrols, and their wrecking cars are constructed from 6-60 Kissel Kars, which have extended from the rear of the chassis a steel platform which carries a swivel cradle. An "I" beam extends beyond the rear of the body and over the platform upon which travels a "crawl," from which is suspended a triplex chain hoist, which one man can hook on either the front or rear end of the disabled car, which he then hoists into place in the cradle on the platform.

G. H. Marshall, inventor of the wrecking car shown, insists that the Firestone cord and fabric tires with which the car is equipped afford the best service of any tire which they have used on this heavy car, which weighs 7300 pounds without the weight of a wrecked car which it tows. Robert Plomert, Jr., general manager of the association, is authority for the statement that a branch will be established in San Francisco within the next 60 days.



HERE IS A SCENE ON THE RIDGE ROUTE, WHICH FATHER GARCES TRAVELED AS FAR BACK AS 1775.

Studying History En Route

Motorists Prone to Overlook Interesting Facts Connected With the Country Over Which They Constantly Travel

SOME day, perhaps, some inspired person, with a store of knowledge of California's history, will issue a series of road maps of California making it easy for the motorist to become familiar with every spot that holds an especial significance in the history of the commonwealth. True, California's history is brief—a hundred and fifty years will take you back to the very beginnings

of things in the making of the state, barring the brief visits of earlier sea-farers such as Cabrillo—but still it is history unique and colorful, though peaceful. Few men have died in California to make ideals come true, but many have lived and toiled unceasingly, and Californians ought to take interest in following their footsteps, particularly when it can be done at the cost of no more exertion than riding in a motor car.

The Californian should feel toward his state as Kipling does toward England. In a letter to a friend Kipling once wrote as follows:

"To me it is a land of stupefying marvels and mysteries; and a day in a car in an English county is a day in a fairy museum where all the exhibits are alive and real, and yet none the less delightfully mixed up with books. For instance, I can go from the land of the Ingoldsby legends by way of the Norman Conquest and the Baron's War into Richard Jeffries' country, and so through the Regency. On a morning I have seen the Assizes, javelin-men and all, come into a cathedral town; by noon I was skirting a new-built convent for expelled French nuns; before sun-down I was watching the Channel Fleet off Selsea Bill, and after dark I nearly broke a fox's back on a Roman road. You who were born and bred in the land naturally take such trifles for granted, but to me it is still miraculous that if I want petrol in a hurry I must either pass the place where Sir John Lade lived, or where Jack Cade was killed. In Africa, one has only to put the miles under and go on; but in England the dead, twelve coffin deep, clutch hold of my wheels at every turn, till sometimes I wonder that the very road does not bleed. THAT is the real joy of motoring—the exploration of my amazing England."

There is nothing that makes history so real to you as to stand at the very spot where it was made. But, because California's history is very vague in the minds of



FORDING SANTA CLARA CREEK, ON MORMON TRAIL, UTAH.

most of us, we pass unknowing by these places, and one mile of road is very much like another. True, if we are on El Camino Real, we may stop for a casual glance at the missions, but our interest in them is superficial, as a rule. But if, like Kipling, we could people the land with the heroic priests, soldiers and adventurers who made California history, it would add new zest to every mile of touring.

To read such accounts as the diary of Father Crespi, who accompanied Don Gaspar de Portola on that famous first journey northward from San Diego, in which they sought the Bay of Monterey and discovered instead the Bay of San Francisco, is perhaps the most fascinating way to acquire a knowledge of California history. True, there are many good histories of California, but the historian must for the sake of brevity omit many little, unimportant things that, despite their unimportance, will link a place in your memory with history. For example, next time you tour to Santa Barbara and pass through Carpinteria, recall that it was so named on that first expedition because they found natives building canoes there. Beyond Santa Barbara they followed the same pass that the State Highway does today, and they named it Gaviota, or Seagull Pass, for the host of sea birds that they saw there.

Remember when you leave Hollywood and start over the Cahuenga Pass that it was there that John C. Fremont accepted the capitulation of the Mexican forces, and that it was there that the conquest of California was made complete. Recall, too, Fremont's famous ride from Los Angeles to Monterey and return—800 miles on horseback in 8 days. His first day's journey was 125 miles, from Los Angeles to a point well above Santa Barbara. There were no smooth boulevards in those days either, and instead of the causeways of the Rincon road, the travelers had



RUINED INTERIOR COAL CREEK FORT, ON MORMON TRAIL.

either to wait for low tide, or fight their way through the breakers that covered the beach at the foot of the cliffs.

If you should go to Big Bear Valley by the desert road, it may interest you to know that the first white man to see the Mojave river was brave Father Garces of the Mission of San Xavier near Tucson, Arizona, who made the perilous journey in 1775 from San Xavier down the Gila River to the junction with the Colorado near Yuma, thence up the Colorado to a point near where Needles is today, and then travelled west across the awful wastes of the Mojave desert to the Mojave river, followed it to its source in Little Bear Valley, crossed the range and down into the San Bernardino Valley and west to San Gabriel Mission. And after such a trip, the good father rested there all of four days before resuming his homeward journey.



CAJON PASS, THROUGH WHICH MORMON BATTALION PASSED ON WAY TO VALLEY OF THE ARROWHEAD.



THERE IS NOW AN EXCELLENT ROAD LEADING FROM THE SUMMIT AND LAKE DONNER, OF GREWSOME MEMORY.

Not content to merely retrace his steps, Garces investigated the lower end of the San Joaquin Valley, and strangely enough, crossed the mountains over approximately what is now the line of the famous Ridge Route. Elliot Coues, in his translation of Father Garces' diary, declares that he apparently followed up Castaic Creek and climbed the Liebre Range, and thence went on north through the Tejon. Indian guides led the good padre, and it is quite reasonable to suppose that the Indian trails did follow this direct route to the San Joaquin,—a route that it remained for the State Highway engineers to open to the vehicles of a modern day.

Next time you motor out through San Geronio Pass, try to picture to yourself how welcome must have been the breezes of the seaward slope of the pass to bold Juan de Anza, the captain of Tubac, and his party of settlers destined for San Francisco whom he led through a trackless desert all the way from Sinaloa, Mexico. There is no desert more forbidding than the one he crossed west of the Colorado, nor one more dangerous, yet it is recorded that he did not lose a single man nor animal on the journey. Puerte de San Carlos, or the Pass of Saint Charles, Anza called the San Geronio Pass, but we know it by the name of the great mountain on the north that the Spaniards named for Saint George. There was no love lost between Spanish and English in bygone days, and just why they should have chosen the name of the patron saint of England for the loftiest peak in the land the padres settled is rather a mystery.

South of San Geronio Pass lies San Felipe Pass, the

forgotten gateway to Southern California. Though steeper than San Geronio Pass and more rugged by far, it shortened greatly the miles of desert travel because it lay almost west of Yuma, instead of far to the northwest. To escape from the burning heat and waterless wastes of the Colorado desert as quickly as possible was the one thought uppermost in the minds of the travellers who journeyed across it. Hence they headed for San Felipe Pass, crossed the Cuyamaca range, rested usually at Warner's Ranch for a while, and then either headed north for Los Angeles or south to San Diego.

Through San Felipe came the bulk of the travel from Mexico by land in the days of the Padres. Followed them the first influx of the gringo invaders who came by the southern route. Through San Felipe toiled the exhausted army of Gen. Kearny, some of the soldiers doomed to die in battle with the Californians at San Pasqual. Sometime if you motor down between Fallbrook and Escondido, it might interest you to seek out the old battle ground. San Pasqual was the bloodiest fight recorded in California—some twenty of Kearny's troopers were killed. Consider what a kindly history has California when a fight that would not attract a line in a daily communique today from the west front is its most sanguine struggle.

Through San Felipe, too, followed the Mormon battalion, heroes of the longest march recorded in American army annals. Recruited in Council Bluffs, Iowa, the Mormon battalion marched to Santa Fe, New Mexico, and thence west to San Diego to aid in the conquest of California. They arrived too late, California was already conquered

when they reached here. So they were quartered for a time in San Diego, and later a portion of the battalion was sent to San Luis Rey Mission. And instead of following the practices laid down by "kultur" today as the proper method of treating captured peoples, the Mormon soldiers proceeded to tidy up the lazy little village of San Diego, and behaved so well at San Luis Rey that the following year when their terms of enlistment were up, the populace did their best to get the military authorities to keep them there. They did not want to see their kindly and energetic captors leave town. If William Hohenzollern were to read the history of the Mormon battalion in California, he might perhaps change his views as the efficiency of frightfulness as a military policy.

Incidentally the town of San Bernardino really had its inception as a direct result of the sojourn of the Mormon battalion in Southern California. Capt. Jefferson Hunt of the Mormon battalion improved his time during his service in Southern California to investigate the country quite thoroughly. Then after his term of service was over, he went to Salt Lake City, where the Mormons had meanwhile established themselves. And strangely enough, soon after, Brigham Young had a vision, and received divine command to the effect that a company of volunteers should follow the lead of Capt. Jefferson Hunt to a valley far across the deserts to the southwest, where a great arrowhead on a mountain should point to healing springs below, and fertile soil should welcome the farmers.

The expedition started accordingly, and, quite marvelously, the vision was fulfilled and the valley of the arrowhead was discovered even as the vision promised. And, at the mouth of the Cajon Pass, the Mormon expedition camped and waited while their leaders bargained for and bought the great San Bernardino rancho for something

like \$2 an acre for 37,000 acres. Then they took possession and founded the town of San Bernardino, only to be compelled to leave it and return to Utah a few years later at the command of the church.

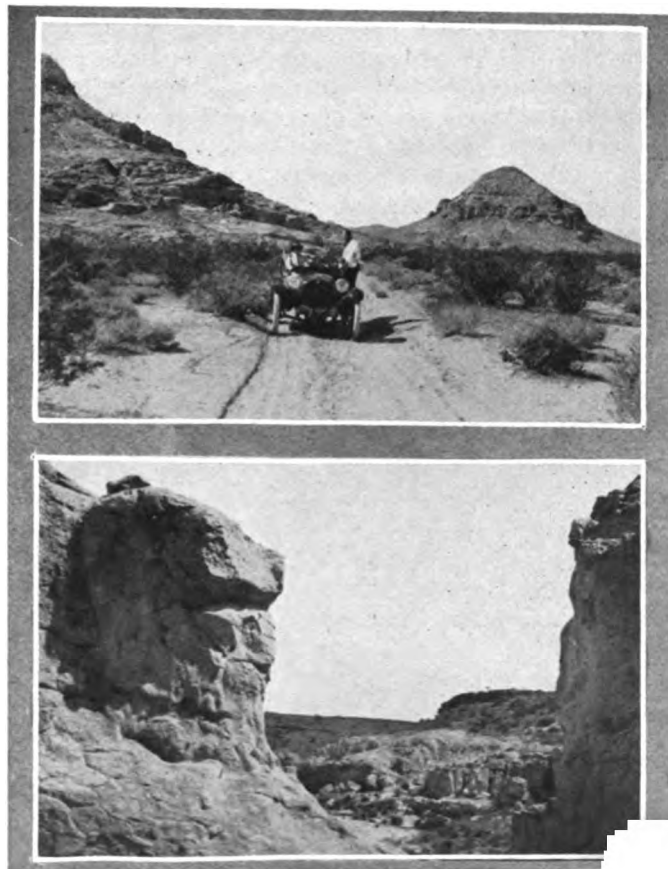
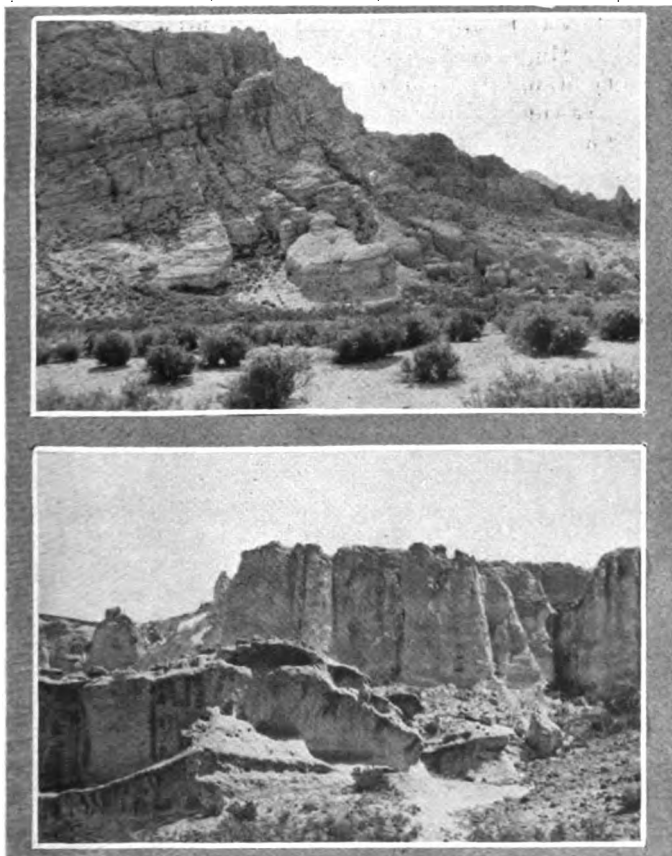
The interesting history of California is by no means confined to Southern California—far from it. Much of it centers around Monterey and San Jose, oldest city of California. Surely a pilgrimage to Sutter's Fort, where gold was first discovered in California ought to be a fascinating motor journey to any Californian. Donner Lake and its sinister memories, the crumbling Sierra villages of the days of '49, such things as these should not fail to stir the heart of anyone who calls himself a Californian, whether by birth or adoption.

Why be content in your motoring to merely "put the miles under and go on?" Make them vivid with memories of California's past and they will mean more to you at the day's end than just so much added to the figures on your speedometer.

Fulton Truck Co. Has New House Organ

The initial number of "The Long Island Breeze," published by the sales department of the Fulton Motor Truck Co., Farmingdale, L. I. Needing no preamble as to its purpose in view, the pamphlet contains interesting items on the activities of the company and of its dealers throughout the country. Conclusive instances of the favor shown Fulton trucks abound and the publication reflects a spirit of life and enterprise that should be a prominent factor in the success of Fulton activities.

Oakland, Cal.—The Chevrolet Motor Co. of California has been authorized by the state commissioner of corporations to issue 750,000 shares of stock to W. C. Durant in part payment for the real property and the factory building of the company located here.



SHOWING CHARACTER OF COUNTRY TRAVERSED BY MORMON BATTALION IN SOUTHERN UTAH AND NEVADA

Motor West

LOS ANGELES-SAN FRANCISCO-PORTLAND-SEATTLE

The Motoring Authority of the Pacific Coast.
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March 15, 1918

Effect of the War Upon Automobile Sales

FOR THE BENEFIT of the wiseacres who would have the public believe that the passenger automobile is a non-essential in these times of strife, we point to the experience of Western Canada, which has been at war now for more than three and a half years.

Manitoba, Saskatchewan and Alberta have given freely of the blood and money of their citizens. As the constant calls for more and more men followed one another, the labor shortage became acute. Horses were needed at the front, and the few obtainable for farm and other work were quoted at prohibitive rates. A capable substitute for the lack of man and animal power was needed more than ever, especially in view of the necessity for greater production in all branches of industry to keep the men at the front properly supplied. Not only was it necessary to fill the gaps caused by the constant drain upon the manpower of the nation, but the substitute must needs be of such a character that the business of the country could be speeded up to meet the extra demands made upon it.

The farmers of Manitoba, Saskatchewan and Alberta could find but one remedy—the motorization of their farms. Immediately the sales of passenger cars and of motor trucks began to increase. In 1915 the gain over the previous year in Manitoba was 27 per cent; 1916's increase over 1915 was 38 per cent, and in 1917 the number of registrations advanced 46 per cent over the previous year. In Saskatchewan the 1917 registrations were 114 per cent over those of 1916, and the gain for the three provinces during the same period was more than 80 per cent.

The Western Canadian farmers and business men bought these cars not as a luxury, but as a utility; it was more patriotic and more profitable to use passenger cars and motor trucks than it was to use horses. Greater production was needed, and there were fewer able-bodied men to do it. Motor vehicles supplied, and are supplying, the need.

the light of these actual experiences of our North-

ern neighbors, "Motor West" believes that, if humanly possible, the production of both motor trucks and passenger cars should be increased rather than decreased during these years of labor and animal shortage in farming and commercial pursuits. To cut the production of passenger cars by 30 per cent, as is proposed by some members of the National Automobile Chamber of Commerce after a conference with the War Industries Board and the Fuel Administration would, if the figures from Western Canada mean anything, be equivalent to slowing up business in general in corresponding measure.

Unless the proposed cut in production is a temporary war emergency measure due to a shortage of steel or to a lack of the means of transporting the raw material to the factories, we believe that it is a mistake to curtail the production of motor cars and motor trucks. In this emergency it would seem that the proper thing to do would be to assist the automobile makers to increase their output, and thus provide our farmers, our manufacturers and our merchants with a capable substitute in the growing dearth of men and horses.

Highway Freight Transportation Becoming Prominent

IN THIS country, as in every country at war, the railroads have proven inadequate to handle the tremendously increased volume of freight which must be moved. Here, as abroad, after every other recourse has been attempted—embargoes, priority rulings relative to freight shipments, and the curtailment of every possible class of rail shipments—our subsidiary or secondary means of transportation has loomed as the only possible solution to the vital problem of freight congestion, car shortage and resultant business depression. Our highways must bear a portion of the burden.

One of the first steps taken by the Council of National Defense was to urge upon every state through which the Lincoln Highway passes, that its section of that great road be brought as soon as possible to the highest state of improvement for the possible use of the government. The four years of effort already concentrated upon the improvement of that road and its original careful selection, would seem to make it unquestionably the first available for federal needs, and its eastern section is already in use by the motor truck transports of the government, carrying supplies of war from interior production and mobilization centers to Atlantic coast ports.

When the war is over, one of the credit items to its account in this country will be the stimulus it has given to a greater federal interest in American highways, and a tendency towards a greater federal participation in the cost of constructing our main arteries of traffic. Highways as an adjunct to railway transportation have proven their value and necessity abroad. They are now about to prove the same thing to the people of this country.

Motor Trucks on Rural Mail Delivery Routes

STATISTICS collected by the United States postal authorities, and supplemented in part by investigations made by crews of tire testing fleets of The B. F. Goodrich Rubber Co., operating in the rural districts, show conclusively that Uncle Sam can enrich himself by at least \$100,000,000 by installing motor trucks on his "farm-to-table" routes. Data shows that the antiquated system in vogue—the use of the horse and wagon

on 44,000 routes throughout the country—is a losing proposition; and to the extent of \$30,000,000 too. The few motor truck investments made by the Government last year earned \$70,000 apiece on an original investment of \$4,200 for each truck. Moreover, communities were reached by the motor trucks that had never been visited before by Uncle Sam's mail carriers.

The assertion that there are roads today never traversed by Government delivery wagons may seem incredulous, but the post office authorities support the statement that of the 2,199,000 miles of roads in this country, 1,122,000 miles have no mail service at all. Furthermore, there are 1,500,000 families in our enlightened nation that have no postal communication with the outside world.

From these figures alone one can see how fields of production can be exploited to the advantage of the American nation through enormous purchases of motor trucks by the Government. It is safe to say that many of these sources of aliments have been denied the public simply because the means of reaching them has not been utilized heretofore. Investigation has shown that there is more than one agency to blame. Many farmers have stated that they would gladly raise more if they had the means to transport it.

Postal officials have shown that the balance of trade is heavily against the agriculturist today—something like eight to one. The motor truck, they believe, can equalize this. There is no reason why it shouldn't.

The greatest advantage of a rural delivery system, adequately operated by motor trucks, is the saving in time for the farmer. Heretofore the farmer has been obliged to hitch up his team and drive to market every morning, provided the market was near, his activity on his farm being gauged by the time occupied at market. With the great clamor among the agriculturalists over the shortage of help this year it is imperative, leading cultivators point out, that the farmer be permitted to remain as much as possible on his acreage. Otherwise the nation at large must suffer from insufficient production. Motor trucks can relieve him of this burden entirely—Government motor trucks.

If the co-operation between farmer and consumer through the "farm-to-table" movement is as sincere as the Government hopes it will be, officials declare it is a foregone conclusion that the thousands of motor trucks in service and being constructed for the Quartermaster's Department will be turned over to the postal authorities at the close of the war and the "farm-to-table" movement will become a permanent institution. Shipments of produce by railroads involves fourteen different operations; by motor truck just four.

How Lower Steel Prices Will Affect Industry

WITH conditions as they are at present the lowering of the price of steel will have no effect in the near future on the price of automobiles. It probably will be a long time before automobile manufacturers will be able to get and use the new-priced steel.

Other commodities necessary in the manufacture of automobiles are continually going up in price. Steel is only one of many elements entering into the construction of the motor car, therefore a decrease in its price alone will not counterbalance the soaring cost of other materials.

For example, tires are more expensive, due to rubber

and cotton being higher as well as because of the tire manufacturers' inability to secure sufficient fabric. Besides the tires, we must consider the higher cost of leather, upholstering material, many of the accessories, paint and almost countless other essentials.

In other words, the increased cost of other essentials are more than offsetting the reduced cost of steel. We are inclined to believe there will be an upward tendency in automobile prices rather than a lower tendency.

Propose 30 Per Cent Cut in Passenger Car Output

Some time ago, representatives of several of the largest automobile manufacturing concerns in the industry were called to Washington, at the request of the War Industries Board and the Fuel Administration, to discuss the situation and determine to what extent further assistance might be rendered and the Government needs supplied.

A careful review of the situation, covering a period of several weeks (the automobile manufacturers co-operating with the Government to the fullest extent), resulted in the National Automobile Chamber of Commerce, composed of 117 automobile manufacturers, at its meeting on March 7th, proposing a voluntary 30 per cent reduction in the uncompleted schedules of passenger cars for the present fiscal year.

This arrangement is entirely satisfactory to the War Industries Board, the Fuel Administration and the manufacturers, permitting the latter to adjust their affairs to meet the Government program without unnecessary business and financial disturbance.

The importance of the automobile industry and the prominent part it is taking in connection with war work, already supplying Liberty motors and aircraft equipment, trucks, ambulances, munitions, gun carriages, field and road tractors, and tanks, is daily becoming more apparent.

Ascot Honors G. Washington on St. Patrick's Day

Still retaining a title whose appropriateness has been dimmed by the lapse of three weeks, the George Washington Sweepstakes race on the Ascot Speedway at Los Angeles will be run on next Sunday, March 17. Sunday, March 10, was to have been graced with the event but California's belated rainy season arrived in time to compel postponement. Accordingly the George Washington event will be run on St. Patrick's Day with the program unchanged. The purse will include \$5,000 and the Blinkey Ben one-mile dash will be run as a side thriller. The Ascot management is desirous of confining its field to eight starters. The list of possibilities, which shows widely varying degrees of uncertainty, includes Eddie Hearne, Tom Milton, Barney Oldfield, Fred Horey and Cliff Durant.

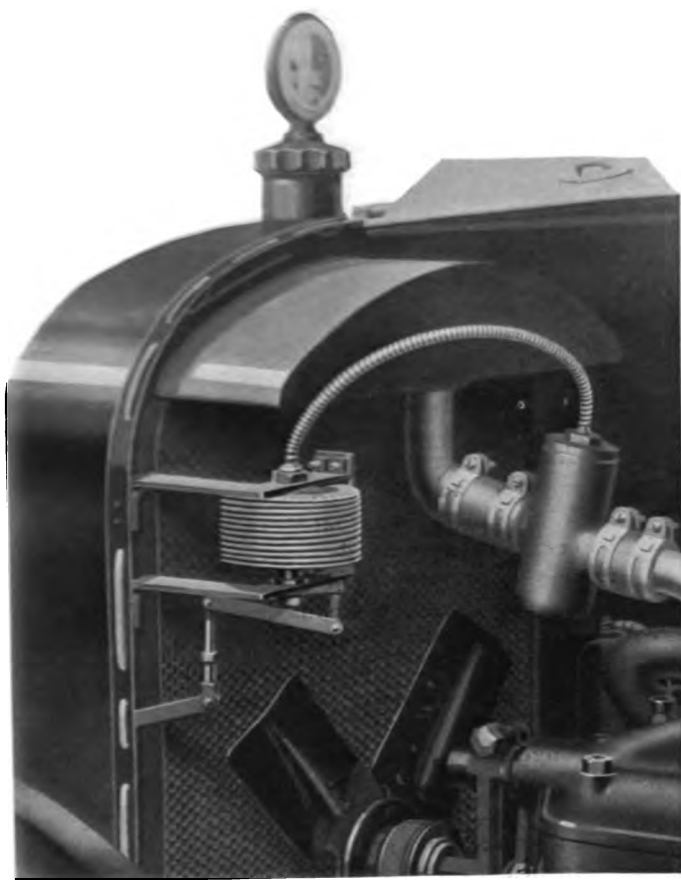
Tacoma Already Planning for July 4th Race

Having decided that the coming season shall witness the best racing the Pacific Northwest has ever seen, the Tacoma Speedway Association has made early plans for a Fourth of July race. The races will all be by drivers enrolled in the register of the contest board of the American Automobile Association.

Kalispell, Mont.—The Pilson Co. has taken the Chalmers agency.

* * *

Walla Walla, Wash.—The Shook-Beckwith Co. has taken the Chalmers agency.



THERMOSTAT CONTROLLING COLUMBIA SIX RADIATOR SHUTTERS.

Columbia 6 Has Thermostat

Automatic Control of Radiator Shutters Makes New Model a Most Economical Car

—Details of Device

TESTS reveal a fuel saving of 30 per cent through use of thermostatically controlled radiator shutters, according to the engineering department of the Columbia Motors Co. of Detroit, which is marketing its four-passenger Sport model with the automatic radiator shutters as standard equipment. Besides the conservation of fuel, the main results of the use of this invention are said to be greater and more constant power, more efficient lubrication, elimination of "choking," "spitting" or "coughing"; elimination of starting trouble in cold weather and the increase of the life of the motor. The Columbia Six is the first car to use thermostatically controlled radiator shutters.

Automobile engineers are manifesting keen interest in the application of the thermostat to shutter control, and it is said to be by far the greatest improvement of the 1918 season. N. R. Grimshaw, a representative of the Standard Oil Co., has highly recommended the thermostatically controlled radiator shutters as an all-year-round necessity for the increase of the efficiency and the decrease in consumption of the low-grade gasoline which motorists are now compelled to use.

The application of the automatic radiator shutter is based on the principle that motor heat is motor power, and that a motor does not give full power unless the highest temperature is constantly maintained. The radiator shutter itself is not new, hand-controlled shutters, which merely took the place of the hood cover in cold weather, having been in use for some time, as have thermostats controlling the amount of water passing through the water jackets of the engine, but the application of

the thermostat to shutter control is new and is said to constitute a most important step in motor car refinement and efficiency.

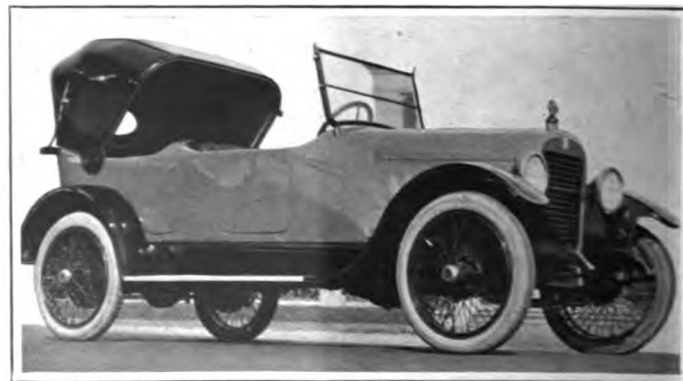
The thermostat used on the Columbia consists of two main parts, the first being a bulb and flexible tube containing the sensitive liquid, a composition in which ether is the predominating ingredient. This bulb is held in an iron housing placed in the water return line. The second part is an expansion drum of flexible copper, which is forced open in the manner of an accordion by the action of vapor formed by heat from the contained liquid. By opening and closing as the motor temperature varies, this drum operates the shutter through a system of levers.

The thermostat becomes active as the temperature approaches 140 degrees Fahrenheit, and the shutters, which when closed permit little air to pass through the radiator, begin to open. This opening action is continued until an engine temperature of 180 degrees is reached, at which temperature the shutter is entirely open. At 180 degrees the motor is working at its maximum efficiency. The highest possible temperature is essential to satisfactory performance with the present-day heavy grade of gasoline, and with the thermostatically controlled shutters, the maintenance of the highest possible temperature is obtained, without overheating of the engine. As any variation of temperature affects the thermostat, the shutter is automatically shifted to meet the new conditions. A Boyce motometer shows the driver at all times that the heat of the engine is being properly regulated, and is an essential part of the thermostat equipment.

A real saving in lubrication oil, and the betterment of the lubrication is said to be attained by the thermostatically controlled radiator shutters. It is a well-known fact that with a rich mixture much more gas than can be vaporized is drawn into the cylinders. This gas has a tendency to precipitate to the crank-case, where it speedily thins the lubricant and the oil thus loses its lubricating quality, endangering the life of the cylinder walls, bearings and all other vital parts. The automatic shutters, by reducing this possibility to a minimum, prolong the life of the motor.

Ray Long, chief engineer of the Columbia Motors Co., believes that the automatic radiator shutter is more a necessity and as important a forward step in motor car evolution as the self-starter.

The Du Pont Fabrikoid Co. is distributing the first copies of a new booklet entitled, "Upholstery and Top Materials." The book is just off the press. It deals with the three grades of Fabrikoid principally used on passenger and commercial cars, viz.: Motor Quality, for automobile and carriage upholstery; Truck Special, for upholstery on commercial vehicles, and Rayntite, for tops and curtains on vehicles of all types. The booklet gives some interesting facts in connection with the history and manufacture of these materials as well as with the characteristics which adapt them to their respective uses. Copies of the booklet are ready for distribution to all persons requesting them. Address the home office of the company at Wilmington, Del.



COLUMBIA SIX FOUR-PASSENGER CAR HAS RACY LINES.



CUTTING LUMBER DELIVERY COSTS

This MACK "AC" truck of the San Joaquin Lumber Company gets the material to the job quickly, unloads in a minute and soon is back at the yards ready for another trip.

The feature of this MACK is the roller body. Loading and unloading is made easy. The entire load can be rolled right off or lifted as in the illustration.

Building material must be delivered right at the job regardless of how hard it may be to get there. "Getting there" is a characteristic of MACK trucks.

They have demonstrated their ability to reduce costs in practically every kind of hauling. They combine power, speed, strength, long life and low operating costs.

Made in 6 sizes from 1 to 7½ tons capacity; with trailers, to 15 tons capacity. Special bodies designed to meet specific needs.

Write for details of MACK performance in your field.

INTERNATIONAL MOTOR COMPANY
NEW YORK

Los Angeles, California; International Mack Truck Corp.
San Francisco, California; International Mack Truck Corp.

Seattle, Washington; T. G. Young
Portland, Oregon; T. C. Atwell



Performance Counts



THE "SUBURBAN SEVEN," THE NEW JORDAN SEVEN-PASSENGER TOURING MODEL.

This new model of the Jordan Motor Car Co., Cleveland, O., is low-hanging, with long straight lines and the fashionable keenly-beveled edges. The new model is in effect a roomy, comfortable touring car combining rakish smartness with the utility of a touring car. It is distinguished by the absence of the "bulge" in the sides between the front and rear seats.

The "Suburban Seven" is completely equipped with everything from traffic bumper to extra tire and is the first completely equipped seven-passenger car ever offered as a stock model. The body is all-aluminum and is furnished in Brewster green and Liberty blue. It is built on the Jordan stock chassis of standard parts with the new Continental motor. By an ingenious arrangement of the upholstery the "bulge" in the tonneau sides is eliminated without sacrificing any of the roominess of the rear seat, which retains its full three-passenger width. The slim, racy effect is heightened by the slanting windshield and low-hanging body. The price on the new model is \$2,375. The Jordan is represented in Northern California by C. D. Rand, San Francisco, and in Southern California by S. F. Seager & Co., Los Angeles.

Automobile to Relieve Passenger Rail Problem

According to R. C. Rueschaw, vice-president of the Mitchell Motors Co., Inc., Racine, Wis., the curtailment of passenger traffic to a degree of 20 per cent in some parts of the country will not work such a hardship as supposed. Just as the motor truck relieved the freight problem in the short hauls and some long ones also, so can the automobile relieve the passenger traffic at this time.

The automobile is a necessity in these days, where transportation means the saving of time and money; and the public having once been educated to flying along the highways and moving goods at from 15 to 30 miles an hour, will not go back to walking and slow moving and expensive horse hauling.

Perhaps it is true that certain conditions of the country have thrown the motor car in the limelight, but one can readily see what a handicap we would be under were it not for the high degree of efficiency obtainable from one. The modern business man must be alert, confident and prosperous to carry on his work. The automobile can be his incentive to greater effort. He must have an ally to meet unusual needs, for if he lets business run haphazard he is apt to be passed by the man who finds more time to do bigger things through the use of his motor car.

For this and many other economic reasons, war or no war, the public is going to buy cars, and the makers will have to build them to meet the public's needs. But whether there will be enough of them built between now and next summer to meet the demand is a very grave question. Wise economy consists in making a day longer, more efficient and constructive. This can be accomplished by owners of automobiles.

Harry Lauder Names Studebaker "Ginger Special"

"I christen thee Ginger Special," said Harry Lauder as he smashed a bottle of sparkling ginger ale, with fitting ceremonies, over the radiator cap of a new six-cylinder Studebaker touring car the other day. The car christened by the famous Scot was the gift of the Los Angeles Studebaker branch to the State Committee on War Savings and Thrift Stamps. It is a high-powered, vividly-hued, patriotically-decorated machine and has already attracted widespread attention on the Coast.

So far the "Ginger Special" has exceeded the expectations of those in charge of the great war savings drive. It has seldom failed to startle the inhabitants of the country towns, who are curious to learn what these city folks are doing with a fiery-red car decorated with all manner of advertising banners and flags. Thousands of Southern California people have been enlisted in the cause through the aid of the "Ginger Special" and a steady flow of silver has been turned into Uncle Sam's commodious pockets.

Much of the Oil Found in Crankcase is Gasoline

The supposed lubricating oil found in the crankcases of motor cars is in many cases composed in great part of gasoline which has not ignited and has leaked down past the pistons, according to the distillation tests of lubricant from crankcases made by an engineer of national repute. In one typical case 45 per cent of the supposed oil was gasoline and only 37½ per cent was good lubricating oil, i.e. that is readily suited to lubricate cylinder wall and piston rings. The oil had been in the crankcase only nine days and a 58 Baume gasoline test was used. A government chemist checked the figures and found them incontrovertible. They should form an illuminating comment on the troubles which annoy us in the present day of low grade fuels. The difficulty is to be solved in two ways—more frequent changing of the oil in the crankcase and greater care in the obtaining and use of low grade gasoline. It is not uncommon for a car to start on a tour with the gasoline tank filled with good grade gasoline and run beautifully for the first few days, or until a fresh supply of gasoline is taken on, when a loss of power suddenly becomes very noticeable. In trouble of this kind, to facilitate starting, a half cup of gasoline may be drained from the carburetor float chamber, thus removing the water and dirt if it is the cause of the trouble. Next, the cylinders should be primed with gasoline, and a cloth saturated with gasoline held over the carburetor intake while the starter is operated.

Recent Trade Literature

The remarkable progress made in the retailing of automobile tires and tire accessories is well typified in a handbook on the subject recently published by The McGraw Tire & Rubber Co., of East Palestine, Ohio. It is entitled "Reaching Your Market" and deals with the fundamentals of success in selling tires to the user. The story is so simply told and the exhibits are so graphic that a dealer can quickly pick out the suggestions most applicable to his own business. The handbook is too expensive a publication to distribute broadcast among dealers, but it will be sent without charge to any who write for it to The McGraw Co., at East Palestine, Ohio.

"How to Run an Automobile," by Victor Page, is a concise, practical treatise explaining in simple language modern gasoline automobile parts, with complete instruction for driving and care. The instructions on 1917 automobile control systems are thoroughly illustrated and easily understood, and the book is up to date in every detail. The work contains over 170 pages and 72 special diagrams and photographs. Published by Norman W. Henley Publishing Co., New York. Price \$1.

Kellogg, Ida.—The name of the Yost Garage Co. has been changed to the Kellogg Garage Co.



REPUBLIC TRUCKS

**Internal Gear Drive—The Power Behind
Means More Mileage—Less Fuel**

The Power Behind More Than 1200 Republic Truck Dealers

BEHIND the unusual success of Republic Truck dealers in more than 1200 distributing centers are:

The largest factory in the world making motor trucks and nothing else.

Sixteen years of motor truck building experience.

The largest national advertising campaign ever made on motor trucks—a constant barrage fire of pages and double pages in Saturday Evening Post, Collier's Weekly, Literary Digest, standard magazines and the trade papers that go to merchants, contractors, millers, furniture

men, hardware men, coal men, ice men and other lines.

Liberal co-operation in the Strong Arm of Republic Service maintained by Republic dealers.

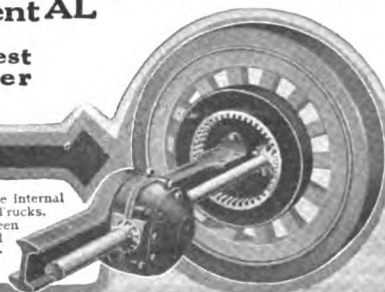
A complete line of trucks from $\frac{3}{4}$ -ton to 5-ton — capacities for every need—with Republic power, Republic construction and the Republic-Torbensen Internal Gear Drive which have made matchless records in truckdom. Prices \$895 to \$4500 f.o.b. factory. Send for our proposition.

Republic Motor Truck Company, Inc.
Department AL Alma, Michigan

**See Your Nearest
Republic Dealer**

**Dealers and Service Stations in
Over 1200 Distributing Centers**

This cut illustrates the internal gear drive of Republic Trucks. Power is applied between hub and rim of road wheels, insuring greatest leverage.





Output of Indiana Trucks to Be Again Doubled

During the last year the output of the Indiana Motor Truck Co., at Marion, Ind., was a little more than doubled and plans are already completed to again double the output this year. The plant of the company has grown until today it has more than 130,000 square feet of floor space. A new building was recently added to care for a large order of Liberty motor trucks for the Government, and with the completion of the war work this plant will be added to the rapidly increasing manufacturing facilities of the company, and will be utilized in turning out the regular product.

C. G. Barley, president of the Indiana Co.; J. W. Stephenson, vice-president and treasurer, and S. W. Winder, secretary, are most enthusiastic regarding the future of the motor truck business. The company has already booked heavy orders for trucks for 1918 delivery, and with an excellent sales force and a splendid list of distributors, Mr. Barley says that there will be no difficulty in placing orders for the balance of the year's output. In the opinion of the president, there will be no motor trucks for orders after July 1 of this year, due to the rapidly increasing demand which he has found general in every part of America.

W. F. Hughes, who was well known for many years as representative of the Rayfield carburetor, and who was mechanic for Ralph De Palma with whom he rode in many great races, especially on the Pacific Coast, is production manager of the Indiana company, and since taking up these duties almost two years ago has rearranged the manufacturing facilities until the plant is today well organized for progressive assembly and for a large output of trucks each month. Arrangements are being made

for the manufacturing of a large amount of the material which enters into the assembly of the truck, and a great deal of very valuable machinery is being added steadily to the production facilities of the company.

The Indiana truck has made most excellent record in every part of the country, and attracted national attention by its splendid showing in the government test between Atlanta and Chattanooga, carrying supplies from the Quartermaster's stores at Atlanta to Fort Oglethorpe. There are now more than a dozen Indiana trucks in that service.

How an Accident Created a Record

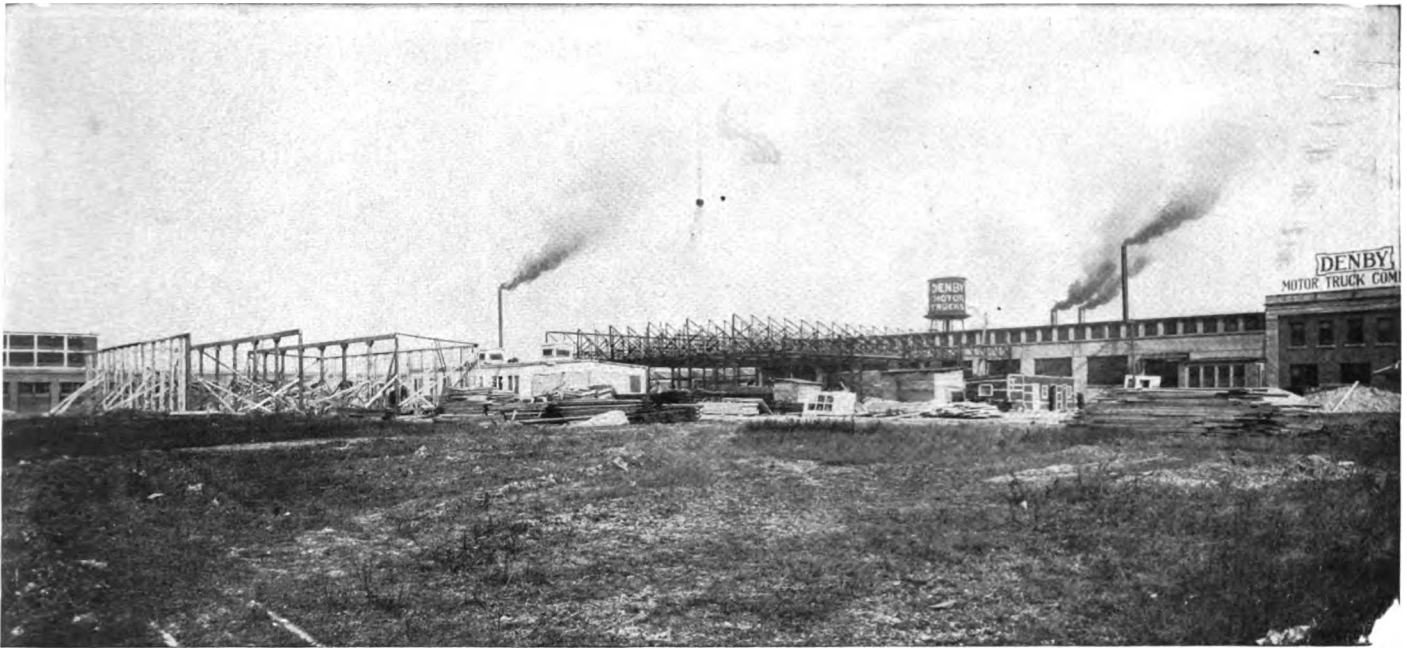
There was created recently at the yards of the American-International Shipbuilding Corporation a motor truck record so unusual that it will be certain to attract national and international attention, and undoubtedly some skepticism, due to its unusual nature, and also to the successful culmination of the feat undertaken. At the outset no record was intended, but that one was made is now a matter of history, and the method of the making of this record is intensely interesting.

Acason motor trucks of large size with many trailers are in steady use in rushing the work at Hog Island. Every truck is of value extraordinary in carrying on the construction work of the great shipbuilding plant. Acason trucks of five tons capacity, pulling four trailers each of five tons capacity, are no unusual sight. It was one of these five-ton Acasons that became partially disabled through the breaking of a starting crank. Prompt telegrams were sent the factory at Detroit requesting that a new crank be rushed. The truck was kept running, not only day times, but through the nights, awaiting the de-



FLEET OF FEDERAL TRUCKS CARRY TONS OF FOOD FOR THE SOLDIERS DAILY.

Information is secured from an authoritative source that four pounds of food stuff are required by every soldier in the United States Army each day. Four million pounds of food stuff are used each day by the United States Army and included in this 4,000,000 pounds of food stuff are 1,200,000 pounds of beef and 35 tons of coffee. The great problem is to transport food in such enormous quantities, as it must be done efficiently and quickly. The photograph shows several Federal trucks which are being loaded to carry food to the army post at Chickamauga Park which is about twelve miles from Chattanooga, Tenn. These trucks make from one to three trips each day and in good weather usually two. The most of the time it is necessary to load them considerably over the capacity in order to supply food to this camp promptly.



Output Insurance!

The photograph above evidences the steps we are taking to keep pace with the constantly growing demand for more Denby Trucks.

An additional building devoted to chassis construction, equipped for rapid, progressive assembly; larger quarters for the road test department; and a new building for frame assembly are now nearing completion. They will provide for a greatly enlarged output, and release other space, sorely needed for additional machine shop and bench assembly work. Plans for still other buildings are already in the architect's hands.

The constantly increasing size of the Denby factory is an assurance to Denby dealers that neither effort nor expense will be spared to keep them adequately supplied with trucks, in spite of the remarkably increased demand this year.

**Capacities
from
1 to 5 Tons**

Denby Motor Truck Company
Detroit Michigan

DENBY

MOTOR TRUCKS

Mention "Motor West," Please, When Writing to the Advertiser

Digitized by Google



FREIGHT CONGESTION NO OBSTACLE TO THE CLYDE CARS CO. WHEN DEALERS DEMAND CLYDESDALE TRUCKS.
The photograph shows a train of trucks starting out from the factory at Clyde, Ohio, for Pittsburg, Pa., with the snow on the roads a foot deep. Two of the trucks are loaded with trucks of a smaller size. This is a common sight on the roads about Clyde, as truck trains leave the factory frequently on long trips.

livery of this crank. Three telegrams sent the company were all given prompt attention, but delays in the express companies and the desire to keep the truck in continuous use caused the motor to be run a long time. Then it was that it was decided to keep that motor going and to try to cover 500 hours without stopping. This was done successfully and the record of the Acason five-ton truck stands today at 21 days, or a total of 504 continuous hours of operation without a hitch. As the truck during working hours was hauling four trailers much of the time, and pulling a total of 25 tons without trouble, this is considerable of a record. The motor of the Acason truck is a draft-horse among engines. This is one of the claims of the company. It is essentially a truck motor.

U. S. Orders 2,000 Nash Trucks

Contracts for 2,000 Nash quad trucks have been awarded to the Paige Motor Car Co., the Hudson Motor Car Co., the Premier Motor Corp. and the National Motor Vehicle Co., by the government. Displaying its patriotism in a substantial manner the Nash Motors Co. has come forward with the working plans and blue prints for its trucks and has given the government free use of all its patents during the war.

Wichita Raises Chassis Prices

The Wichita Falls Motor Co., of Wichita Falls, Tex., has advanced the prices on its motor truck chassis. Models A and K, one-ton capacity, have been raised from \$1,750 to \$1,800; model L, 1½-ton, \$1,950 to \$2,100; models B and M, two-ton, \$2,250 to \$2,500; model R, 2½-ton, \$2,500 to \$2,700; model O, 3½-ton, \$3,450 to \$3,600; and model Q, five-ton, \$4,000 to \$4,300.

A Successful Motor Stage Line

One of the most strikingly successful motor stage lines in the Pacific Northwest is that operated by A. S. Broxton, between Walla Walla and Dayton, Wash., a distance of 30 miles. The round trip is made twice each day on regular schedule—a total daily mileage of 120—and in nine months, failure to make the scheduled time has happened but six times. The speedometer on Mr. Broxton's Oldsmobile now shows a mileage of 30,701. In running this distance only one day has been lost—when after roll-

ing 25,000 miles, the engine was inspected thoroughly. The gasoline consumption has averaged nearly 16 miles per gallon.

Cannot Recover for Tire Wear in Driveaways

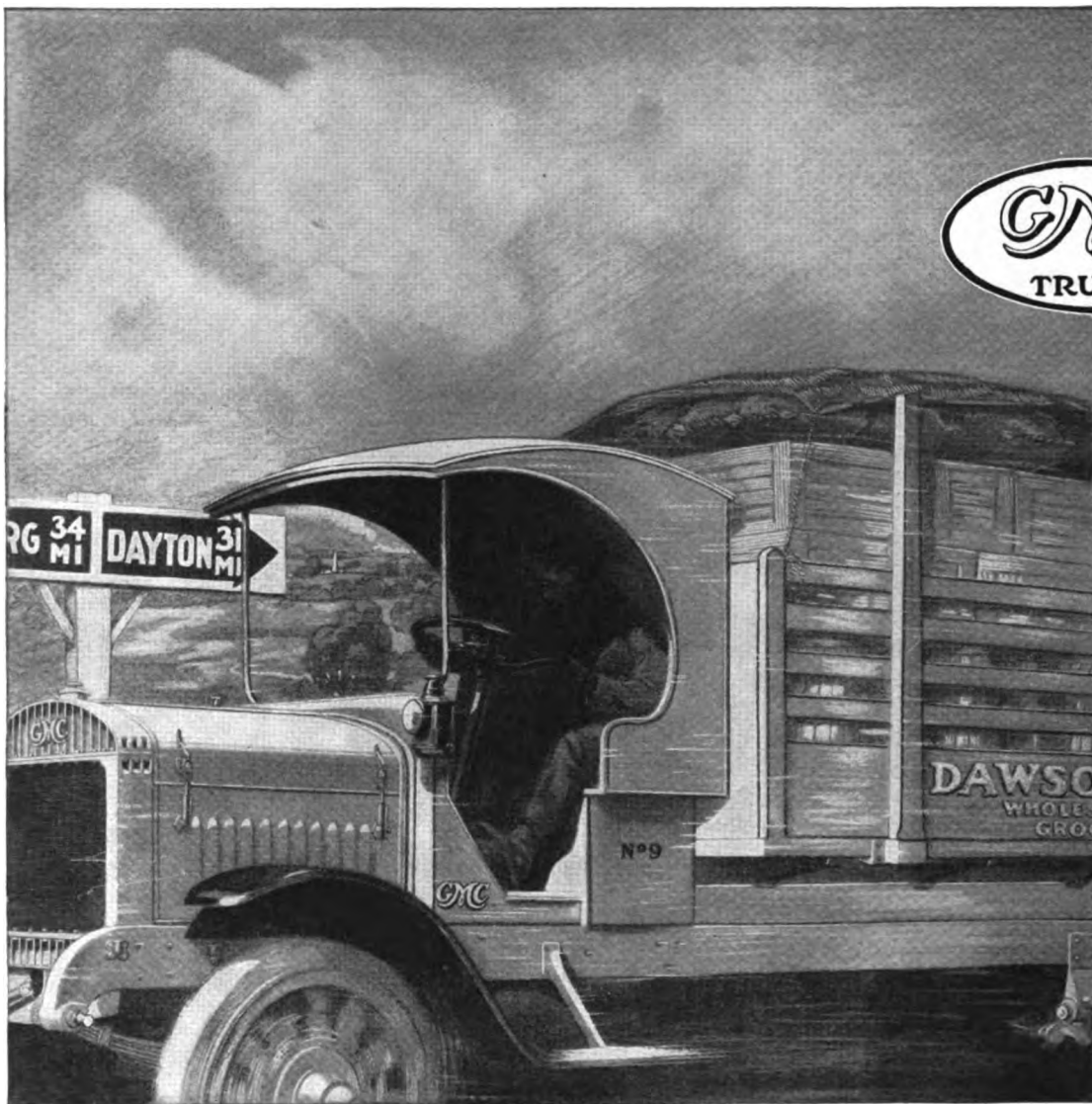
A Detroit judge has decided against a purchaser who entered suit because a car delivered by road had the tires worn. This judge, in his decision, stated that the courts must take cognizance of the fact that the railroads are badly congested, and that in delivering its cars under their own power the automobile manufacturers make use of the only means of delivery now open to them. The judge said that this means of delivery did not add to the freight difficulties, thus making the prosecution of the war that much easier. He said that the purchaser must stand reasonable damage occasioned in this way.

Mais Wins at Phoenix, Feb. 24

The fifty-mile free-for-all race for Arizona cars and drivers held at Phoenix, Ariz., Sunday, Feb. 24, practically amounted to a match race between J. A. Mais, Miller Special, and Jimmy Thomas, Overland No. 8. Mais, it was apparent, held the deciding margin of speed, but for forty-six laps the two cars ran abreast, until in the last four miles Mais asserted his superiority and finished with a lead of three-eighths of a mile. Fike's Jordan finished third. The main race closed in a drizzle of rain. Mais also won the Australian pursuit race, eliminating the Overland after the latter had overcome the Stutz and the Thompson Special entries.

To Begin Work on San Luis Obispo-Bakersfield Road

The Cholame Pass state highway lateral, connecting San Luis Obispo and the Coast district north of Santa Barbara with Bakersfield and the southern end of the San Joaquin Valley, will be under construction some time during the coming spring. The California state highway commission has granted the petition of the San Luis Obispo county supervisors to begin construction. The first contract to be let for the building of this coast-to-valley highway will be for a nine-mile section over the so-called Cholame Flats, through Palonia Pass and leading into Antelope Valley. The road will be an all-year highway before any paving or other construction is done.



GMC trucks are built in all practical sizes, 3/4-ton to 5-ton capacity—six sizes in all. Each size better suited than any the rest for a particular class of work.

Via GMC Through Freight

Every once in a while comes an upheaval in the stereotyped way of doing things; traditions are swept away by a more direct, more efficient method.

Just now the pressure has overcome time-honored traffic rules, and transportation has broken out on a new line, due to the exigencies of the time.

The motor truck has superseded the slow freight with its annoying delays, cumbersome routine, and vexing uncertainty.

Instead of draying goods to the freight house at the shipping end, then waiting while they are checked, loaded, hauled, unloaded, re-checked and delivered, many shippers are serving customers direct by GMC Through Freight.

GMC Trucks are taking part in this kind of service as fast as a factory working overtime can turn them out. They are rolling forth on the paved and unpaved highways of commerce.

In relieving the traffic-bound business world GMC Trucks are playing a prominent part in solving a national problem. And in doing this the road-ability of GMC Trucks has demonstrated that direct-to-destination trucking regardless of roads or weather is sure, practical and satisfactory.

No matter what your line of business may be, there is a GMC Truck to fit your requirements. They are built in six practical sizes.

Let your next truck be a GMC.

GENERAL MOTORS TRUCK COMPANY

One of the Units of the General Motors Corporation

PONTIAC, MICH.

New York Philadelphia Boston Chicago
St. Louis San Francisco

Distributors Most Everywhere

(224)



Tractor a Man-of-All-Work

Besides the Heavier Farm Operations It May
Be Used for a Hundred or More
Varieties of Work

WITH the increasing use of tractors and the increasing scarcity of horse flesh, the number of uses to which a tractor may be put becomes more and more a deciding factor in its purchase.

Tractors were first used on the larger farms, where there is such a great amount of heavy work that the machine may always be kept busy by tending only to the plowing and the pulling of the harvester. The operator of the small ranch, however, does not have sufficient plowing and harvesting to keep the tractor busy, and it is therefore to his advantage to find out other ways in which it may be kept busy.

It is not always necessary to find such work, for even on the small place the saving in cost over horses and mules amounts to enough during the plowing and harvesting seasons to make the tractor a good paying investment even though it remains idle two-thirds of the time. At the same time, however, the more work the tractor owner can find for his machine, the greater will be the profit it earns for him, and it is therefore to his interest to keep it busy as much of the time as possible.

A couple of years ago, the Holt Mfg. Co., at Stockton, Cal., offered a prize to the operator of a caterpillar tractor who could submit the greatest number of uses to which he had put the tractor. The prize was won by a Delano, Cal., rancher who submitted a list of forty uses to which he had put the caterpillar tractor. A hundred or more different uses were disclosed by the various entries in the contest. Naturally, many of the uses listed were excep-

tional ones, such as may occur only rarely in individual cases. There were, however, enough practical uses listed to show the tractor's adaptability.

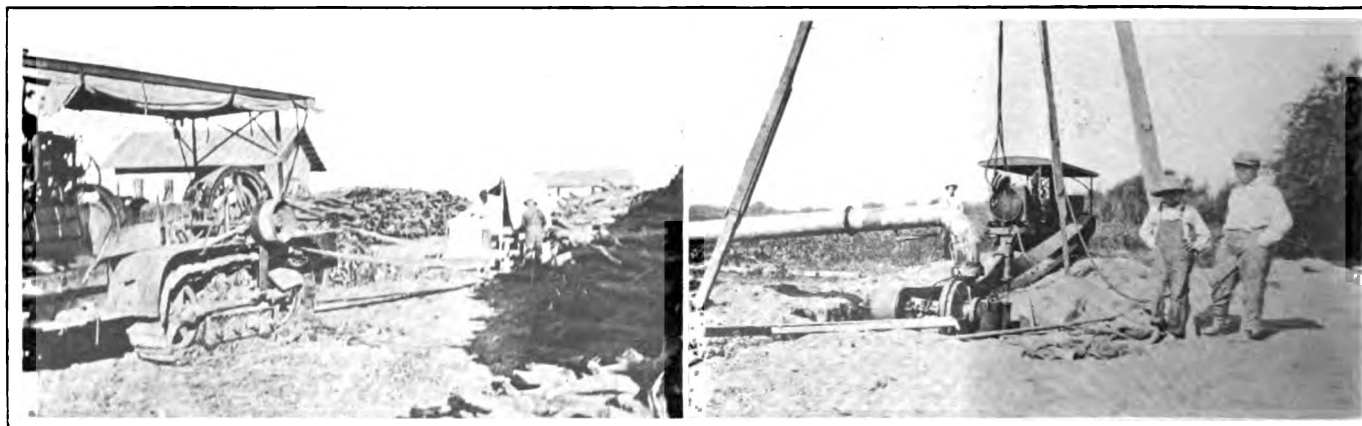
Among the unusual uses was the statement of one operator that he had used the machine in place of a gate when the gate was broken. Another used the tractor for breaking mules to lead and to accustom them to machinery. Another pulled out of a well with the tractor, a horse that had fallen in by accident.

But the practical uses far out-numbered these, among them being the following: pulling plows, pulling drills, disc harrowing, pulling harvesters, land leveling, scraping, pulling out fence posts, erecting a derrick, moving a house, road grading, up-rooting old roads, pulling trees, up-rooting stumps, hauling lumber, hauling water, clearing weeds, logging, sawing wood, making ditches, making levees, stretching fence wire, and so on, almost without limit.

The principal thing to remember is, that with a tractor that is versatile in its uses, the only limit to its adaptability is the ingenuity of its owner. A certain amount of enterprise is also essential, and the tractor owner must possess the confidence that is instilled by owning a machine which is able to undertake and successfully accomplish any one of many different kinds of work.

The tractor of all-around usefulness is particularly valuable to the owner who undertakes contract work. Many tractor purchasers find it practicable to buy a machine much larger than is necessary for their own work. This gives them the assurance of ample power for all of their own requirements and in addition enables them to complete their own work in quick time, after which they will be able to handle the contract work, of which large quantities always await the enterprising and successful tractor owner.

In every community will be found one or two tractor owners who do work on contract, or custom work, as it is often called, who farm no land of their own, and whose outfits are kept busy nearly every day in the year. The



TRACTOR CUTS DOZENS OF CORDS OF WOOD A DAY.

HOOKED UP TO ROTARY PUMP, IT IRRIGATES THE FARM



For the Big Hard Jobs of Lumbering and Mining

Out in the mining and lumbering country where tons take the place of pounds, the life of a motor truck often depends almost entirely on its ability to stand savage and continuous punishment.

On these big hard jobs, Service Motor Trucks will make good day-in-and-day-out; dragging burdens over roads and up grades considered next to impossible until owners see the performance with their own eyes. More and more these hard jobs are being turned over to

Service

MOTOR TRUCKS

The man with a heavy, difficult hauling job to do can turn it over to a Service with the complete assurance that he has picked a truck that will do the work the quickest, easiest and most economical way. There is no guess work about it, for, unless his problem is decidedly unusual, we will be able to name users whose problems are just as difficult as his—maybe more so—and he can get the truth direct from headquarters.

There are, of course, many reasons for the unusual stamina and wear-defying strength of the Service. Here are some of them:

20% SUPER-STRENGTH in every detail without excess weight. This means durability and long life.

SMOOTH-STARTING CLUTCH—simple, non-slipping, non-grabbing, low in upkeep cost.

FINAL WORM DRIVE—durable, unparalleled in efficiency, absolutely silent.

11% GREATER POWER than others of the "Dominant Seven" using similar power plants. Absence of vibration minimizes wear and tear—increases power and efficiency.

SERVICE SUPER-SPRINGS—long, wide, flexible, semi-elliptic—absorb all road shocks—afford absolute safety from severe strain with fullest load.

For hard difficult hauling jobs, the first consideration is super-strength. A truck without it cannot and will not endure. And next to strength, power—more than you need. And after that comes the factor of operating costs.

Super-strength, super-power, unparalleled stamina and low operating costs! In a Service Motor Truck you get them all and at a lower price than any other member of the "Dominant Seven"—Truckdom's recognized leaders.

Get the facts—direct from us or from our distributor.

Service Motor Truck Company

DEPT. A

WABASH, INDIANA

**SERVICE
FIRST**

most successful of these men have established the reputation for good work—they purchase good tractors in the first place and then take good care of their machines so there will be no delays in the field and no inconvenience to the man hiring the outfit.

Summing it all up, the matter of tractor uses is largely an individual problem. The tractor must be right and must be versatile, but if it has these qualities, it is up to the man himself to use his ingenuity in keeping it busy on various kinds of work.

Maxwell Company Reveals New Tractor

The Maxwell Motor Co., Detroit, recently surprised the automobile world with the news that for five years its engineers have been developing a tractor, and that the company is on the eve of production for this addition to the Maxwell line.

The tractor was revealed for the first time at the Maxwell-Chalmers Dealers' Dinner during Chicago Show week; its presentation being by means of motion pictures. Several reels of films were shown. Some 500 dealers present were amazed by the completeness of the new product, and the surprising new tractor features it embodied. Tests of the machine were made under the supervision of P. R. Janney, Maxwell field engineer, on sugar and rice plantations in Louisiana and in other parts of the country.

Following are some of the specifications of the new Maxwell tractor: It is a three-plow machine, employing enclosed drive. Wheels are 48-inch in diameter. The motor dimensions are $4\frac{1}{4}$ -inch bore, by 6-inch stroke. A cone

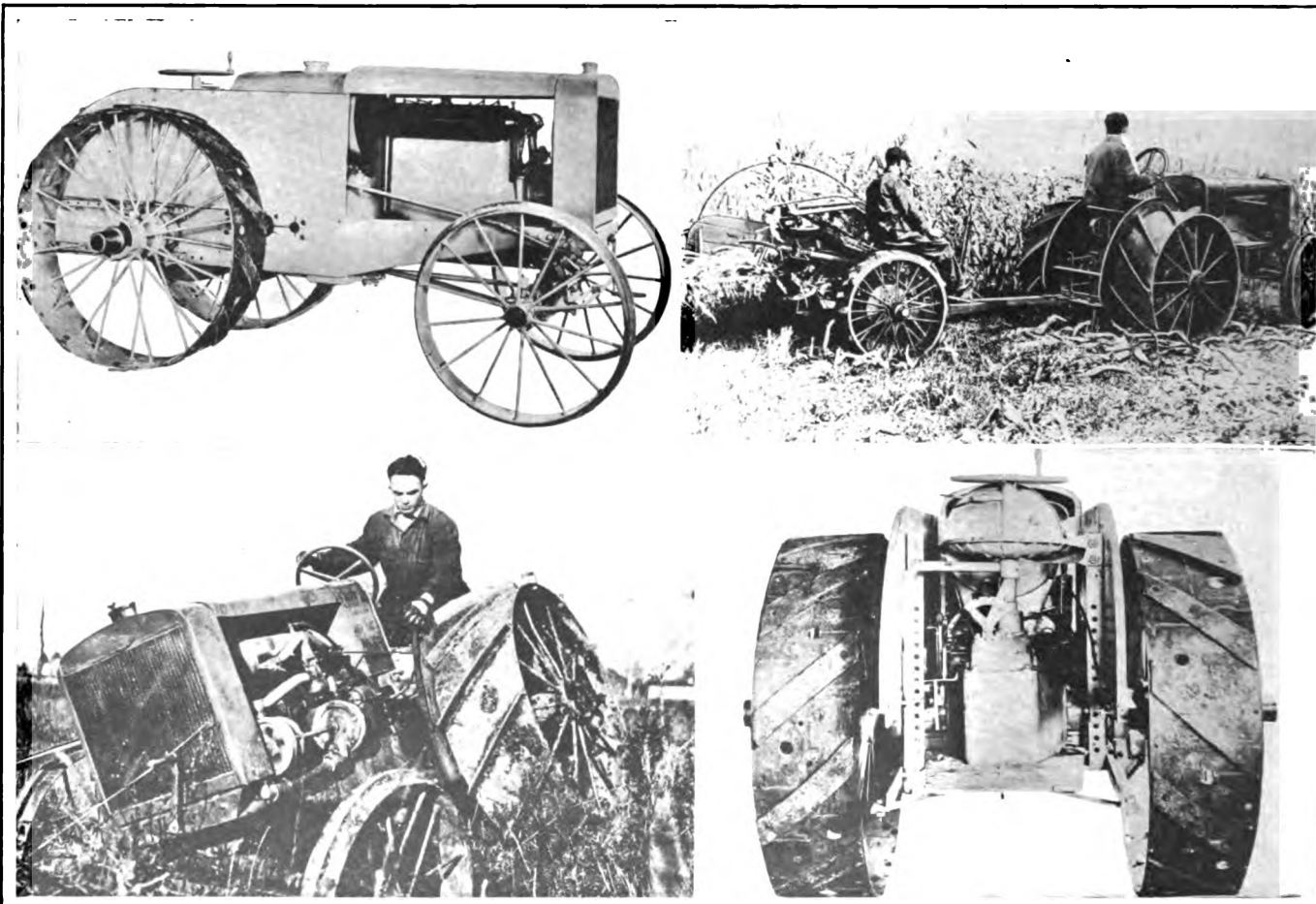
clutch is used. Pressure oil feed with splash is used. There are three oil pumps to take care of the tilting of the tractor. Magneto is used for ignition, with impulse starter. Governor and fan are gear-driven. The governed speed is 900 revolutions per minute. Make of carburetor is undecided. Gasoline is fed by gravity from a tank of 26-gallon capacity. The cooling system contains 9 gallons of water.

The drive is taken from the clutch shaft to transverse shaft by bevel gear. A pulley is placed on one extremity of the transverse shaft and a cable hoist between the frame and the transmission case is on the same shaft. Reduction gearing, through shafts, back of the transverse shaft.

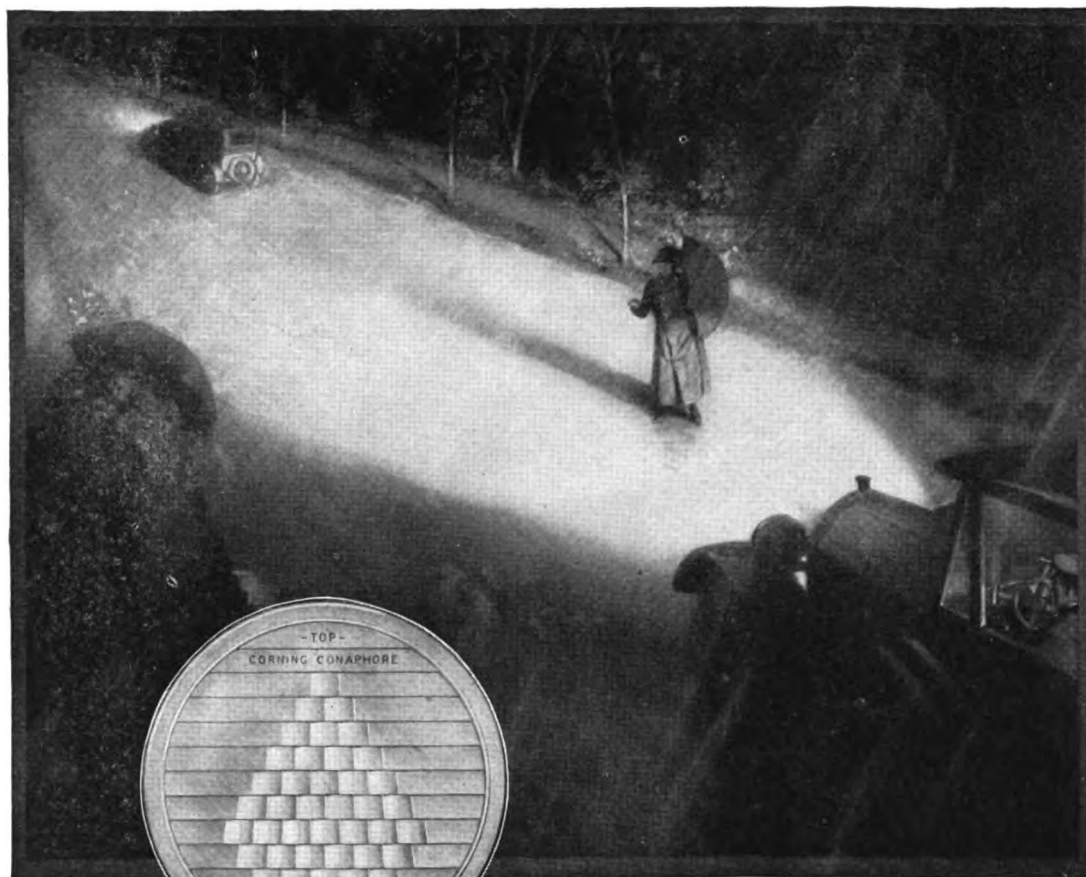
The tractor has three speeds on either drive or pulley gear reductions. A speed of 6 miles per hour is attained on high at 900 R.P.M. The intermediate or plowing speed is $2\frac{1}{4}$ miles per hour at 900 R.P.M.; low speed, $1\frac{1}{4}$ miles per hour at 900 R.P.M. Transmission bearings are all anti-friction type with narrow center-to-center distances, not exceeding 14-inches at any point.

The frame is the accepted tractor construction, of pressed steel, having a depth of 7-inches. Oil tubes of the engine can be taken out and cleaned. This is an example of the accessibility of the entire tractor. The price has not been fixed, but the figure will prove to be low.

The Cleveland Motor Plow Co. has changed its name to the Cleveland Tractor Co. and will increase its capital stock from \$600,000 to \$6,000,000. Of this, \$600,000 is to be issued now, making a total of \$1,200,000 worth of stock outstanding. Additions are now being erected which will enable the company to produce 8,000 tractors a year.



THE NEW MAXWELL TRACTOR—(Upper left) Hood slide removed, showing heavy duty motor. (Upper right) Harvesting and binding corn. (Lower left) Showing advantage of three-point suspension. (Lower right) Rear view; gears inclosed, and protected from rain dust and sand, thus insuring long wear.



THE
CONAPHORE
*Smooth front surface
Easily cleaned*

Photograph by L. A. Hiller
Note how the mellow light from the Conaphore shoots through the mist. There is no "back-glare" to confuse the driver

Get your share of early Spring business

Strong April demand for Conaphores means extra profits for the trade

The Noviol Conaphore is the only automobile headlight glass that shoots a powerful beam of light through rain and mist without "back-glare."

National Conaphore advertising is driving home this exclusive feature to motorists. This means a big demand for Noviol Conaphores during the wet, foggy season of early Spring.

The Noviol Conaphore gives new comfort and safety to night driving under adverse weather conditions, and motorists are quick to appreciate the fact—just as they appreciate the 500 ft. range and no-glare features of this remarkable headlight glass.

How the beam penetrates

Moisture particles in the air easily diffuse the blue and violet rays present in all ordinary white light. This is the chief cause of the dangerous "back-glare" which blurs the driver's vision.

Noviol Conaphores correct this dangerous condition. The yellowish-tint Noviol Glass (patented) absorbs the blue and

violet rays, but projects all the rest of the light. Thus the diffused "back-glare" is done away with, and danger is eliminated.

Keeps light within legal limits

The Conaphore entirely overcomes the menace of glare. It uses all the light but controls it within the law's requirements.

Patented corrugations on the inner surface bend down the light rays and shoot them along the road. Cylinders fan the light sidewise. This provides a 500 ft. range with ample side illumination. As the height of the beam is never more than 42 inches, there is no chance of blinding approaching motorists and pedestrians. Thus the Conaphore gives maximum range, and at the same time kills all glare.

Made also in clear glass

For those who prefer, the Conaphore is made in clear glass. Clear glass Conaphores give 500 ft. range and eliminate

*Manufactured by the World's Largest
Makers of Technical Glass*

CONAPHORE

Pierces Fog and Dust—No Glare—Range
500 Feet.

glare, but do not pierce rain and fog. We strongly recommend the Noviol.

Easy to install

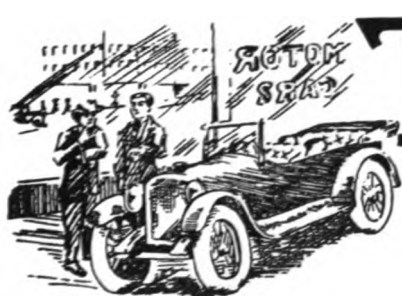
You will have no difficulty in installing Conaphores for your customers. Simply take out the old headlight glass and put the Conaphore in its place, smooth side out. Sizes made to fit all cars.

Dealers—Prepare now to handle the Spring demand for Conaphores in your territory. Get in touch with your jobber at once, and take the early season profits as well as the later ones.

Jobbers—Write us for full particulars on the Conaphore—now, before the motor ing season gets fully under way.

	Noviol Glass	Clear Glass
Retail Price List (Per Pair)		
5 to 6 1/4 inches incl.	\$2.40	\$1.60
7 to 8 1/2 inches incl.	3.50	2.50
8 3/4 to 10 inches incl.	4.50	3.00
10 1/4 to 11 1/2 inches incl.	6.00	4.00
Prices 25 cents more per pair west of Rocky Mountains.		
Sizes vary by steps of 1/4-inch above 6 1/4-inch size.		

CONAPHORE SALES DIVISION
EDWARD A. CASSIDY Co., Mgrs.
Madison Avenue and 40th Street, New York City
CORNING GLASS WORKS



Trade Briefs and Factory Gossip

Ajax Rubber Co.'s New Officers.

H. L. McClaren, whose election to the presidency of the Ajax Rubber Co., Inc., was announced in our last issue, is widely known throughout the tire and automobile industries. For a



H. L. McCLAREN
Just Elected President of Ajax Rubber Co., Inc.
number of years he has been president of the Racine Rubber Co., Racine, Wis., and, over a period of years, was president of the Mitchell Motors Co., of the same city. He remains at the head of Racine Rubber Co., that organization and the Ajax Rubber Co. being affiliated institutions. Other new officers elected were Stuart Webster, vice-president, and F. E. Dayton, secretary. Mr. Webster is also treasurer of the Racine Rubber Co. Mr. Dayton, the newly elected secretary, has been general sales manager of the Ajax Rubber Co. Horace DeLisser, chairman of the board of directors of the Ajax Rubber Co., was re-elected. Louis C. Detribats and L. T. Vance were re-elected vice-presidents, and Harold W. Stimpson was re-elected treasurer.

* * *

George Batten Co. Head Dies.

George Batten, president of the George Batten Co., Inc., died on the 16th of February, according to the announcement recently made by the company.

Bradfield Resigns from King Co.

Following the announcement of the resignations of Vice-President and General Manager T. E. A. Barthel and Chief Engineer T. P. Chase, of the King Motor Car Co., comes a statement that H. C. Bradfield, the field representative of the company, has voluntarily resigned. Bradfield's duties will be taken over by Vice-President W. D. Nesbitt, with headquarters in New York, and Robert Walsh, formerly with Maxwell and Briscoe, who joins the company as assistant to the sales manager.

* * *

Bowman is Acason General Manager.

J. F. Bowman has been elected vice-president and general manager of the Acason Motor Truck Co. He was formerly vice-president and sales director for the company and before joining the Acason company was sales manager of the Federal Motor Truck Co. H. A. Conlan, also formerly connected with the Federal company, has been appointed sales manager of the company.

* * *

Selling Mohawk Tires for 20 Years.

M. E. Mason, sales manager of the Mohawk Rubber Co., Akron, Ohio, has just completed his twentieth year in the sales end of the tire business.



M. E. MASON
Sales Manager Mohawk Rubber Co., Akron, O.

Vreeland Heads Abbot-Downing.

The Abbot-Downing Truck & Body Co. has been incorporated to absorb the Abbot & Downing Co. of Concord, N. H., and greatly increase the output of Concord trucks, Concord



E. E. VREELAND
Pres. and Gen. Mgr. Abbott-Downing Truck & Body Co., Concord, N. H.

bodies, Concord wagons and other products. E. E. Vreeland becomes the new president and general manager. Mr. Vreeland has been associated with the Fulton Motor Truck Co. for the past two years, was instrumental in financing that company and was its treasurer and advertising manager until he resigned to become the active head of the new Abbot-Downing Co. He is also treasurer of John Opitz, Inc., manufacturing chemists; a director of the Fulton Co.; president of the E. E. Vreeland, Advertising, Inc., and president of the Vreeland Advertising Press of New York. Concord trucks in 1, 1½ and 2, 2½-ton models were designed about two years ago and placed upon the market. A 3½-ton model is in preparation and a 5-ton model will complete the line. Until the present, Concord Trucks had been sold exclusively retail to an established trade. Under this reorganization, the company enters the field of motordom in a wholesale way. For the first time its product is available to the automobile dealers of America and export trade.

DU PONT AMERICAN INDUSTRIES



Dealers Wanted

Our Nation-wide advertising campaign is producing thousands of inquiries, which must be referred to local dealers near the inquirer.

We need at once in many cities of 10,000 or more population:

The Leading Auto Top Maker
 The Leading Auto Body Upholsterer
 The Leading Auto Refinishing Concern
 The Leading Auto Accessories Dealer
 The Leading Boot Maker and Repairer

to supply the inquirers who answer our advertisements of

Rayntite Fabrikoid Top Material
 Fabrikoid Motor Quality Upholstery
 Fabrikoid Marine Special
 Fabrikoid Truck Special
 Harrison Auto Enamel
 Harrison Marine Paints and Varnishes
 Py-ra-lin Transparent Curtain Windows
 Pontoklene Tar Remover and Cleaner
 Du Pont Leather Renovator
 Du Pont Outdoor Brass Lacquer

To insure quick action, please give us the following information:

Do you buy through a jobber? State whom and where.

If you buy direct and are not rated, give bank and commercial references.

State nature of your business and line which interests you.

If we refer to you all inquiries from your vicinity, will you do your best to sell them our product?

If you are not a "live wire" and prepared to handle business with push and enterprise, please do not answer this advertisement.

Sales Promotion Division

DU PONT, WILMINGTON, DELAWARE



Caldwell Asst. Adv. Mgr. Ajax Rubber.

Elmer E. Caldwell has been appointed assistant advertising manager of Ajax Rubber Co., New York City. Mr. Caldwell has already taken over the duties of his new position. He assists Charles R. Collins, advertising manager. Mr. Caldwell has been assistant advertising manager of the Michelin Tire Co., and prior to that he acted for the Willys-Overland Co., as advertising manager of the Canadian branch at Toronto. His work will be confined principally to the dealer division of the Ajax Rubber Company.

* * *

Republic Heads Form Tractor Co.

The R. & P. Tractor Co., Alma, Mich., has been formed by men closely associated with the management and ownership of the Republic Motor Truck Co. of the same city. Starting with \$5,000 capital, the company will turn out a tractor of a design following the ideas of F. W. Ruggles, president of the Republic Company, and Channing Parsons.

* * *

F. W. D. Doubles Capital.

The Four Wheel Drive Auto Co., of Cliftonville, Wis., has again doubled its capital stock, from \$1,000,000 to \$2,000,000. A stock dividend of 50 per cent has been declared. At the same time J. D. Cotton has been elected a member of the company's board of directors.

* * *

Ross Joins U. S. Truck.

H. M. Ross has been made district manager, with headquarters in Chicago, for the United States Motor Truck Co., of Covington, Ky. Ross is a pioneer in the industry and has been connected in turn with the White, Federal and I. H. C. trucks.

General Motors to Buy Chevrolet.

Accompanying the announcement that the Chevrolet Motor Co. is to be purchased by the General Motors Corp., is the report that the DuPont interests have secured a substantial interest in the General Motors Corp. The connections between the DuPont and General Motors interests became close in October, 1915, when Pierre S. DuPont and L. G. Kaufman, president of a bank in which the DuPonts are large stockholders, entered the General Motors board of directors. The entrance of the DuPonts brings with it the plan to increase the General Motors stock from \$102,000,000 to \$200,000,000, which will cover the purchase of the Chevrolet Co. The effect of the purchase will be to make the Chevrolet a division or department of the General Motors instead of a separate company.

* * *

Whittaker Promotes Acason Sales.

Donald F. Whittaker, former sales manager of the Detroit Truck Co., has been appointed advertising manager and sales promotion manager for the Acason Motor Truck Co., Detroit. Before his connection with the Detroit Truck Co. he acted as assistant advertising manager and promoter of sales work for the Federal Motor Truck Co.

* * *

Bernhardt Doing His Bit.

H. O. Bernhardt, formerly production manager of the Harroun Motors Corp., under whose supervision the Harroun plants at Wayne were planned, erected and equipped, is now a major of the Central Bureau Supervision Section on an important Government assignment connected with the production of a large variety of Government orders.

Maxwell Prices Increased.

Announcement has been made by the Maxwell Motor Co. of an increase in prices which became effective Mar. 1st. The revised schedule shows an addition of \$80 to the present price of all passenger cars and one of \$100 to that of the Maxwell truck. This action has been made necessary by the increased cost of doing business and curtailed production—due to shortage of materials, rising cost of labor and the increased cost of distribution due to transportation difficulties. The new Maxwell prices are as follows: Touring car, \$825; roadster, \$825; truck (chassis), \$1085; sedan, \$1275; six-passenger town car, \$1275 (wire wheels); \$1175 (artillery type wheels, wood); all-weather top, \$935.

* * *

Supervises Harroun Materials.

Production Manager John E. Garlent, of the Harroun Motors Corporation, announces the promotion of W. F. Tompkins to the position of supervisor of materials. Mr. Tompkins has been serving as assistant purchasing agent of the Harroun Co. since its original organization.

* * *

Oakland Models Advanced \$60.

A \$60 increase in the price of all models has been announced by the Oakland Motor Car Co., Flint, Mich. The new prices, which went into effect on March 1, are as follows: Town car, \$2000; unit body sedan, \$1550; unit body coupe, \$1550; convertible sedan, \$1250; roadster coupe, \$1210; five-passenger touring car, \$1050; and three-passenger roadster, \$1050. The soaring cost of labor and raw materials is responsible for the slight increase in Oakland prices, according to the officials of the company.



GETTING BUICK CARS FROM THE FLINT, MICH., FACTORY AS IT USED TO BE—AND AS IT IS NOW.

Last Summer it was no uncommon sight to see huge trainloads of Buick cars, consigned to the Howard Automobile Co., coming into the Salt Lake yards—speak it in a whisper!—in coal cars. Each coal car carried three Buicks, two on the floor of the car and one superimposed on the others. Frequently no fewer than fifty huge coal cars in a single train rolled into the Southern California metropolis, carrying a total of 150 Buicks. Now the Howard Co. considers itself lucky if they can now and then get a train of flat cars, loaded with the precious Buicks. But better times are coming, and deliveries are becoming more frequent. In the large picture are shown the Buick-laden coal cars, which we have no hesitancy in publishing, now that heatless Mondays are a thing of the past. In the insert is shown a loaded train of flat cars coming into the yards.



Many Kinds of Economy With Firestone Tubes

ONE of the strongest factors for extra measure of tire mileage is the protection given the casing by the enduring liveliness of the Firestone Red Inner Tube. It is built, layer on layer, by the laminating process, into one integral unit of endurance against heat and grind. This tube means for the man who sells it, the lasting economy and long-time dividends of good will.

Firestone Red Tubes sell best because they serve best. The prices are eye-openers on all the Firestone values. The facts will be plain to any motorist who buys Tire Accessories. If a Firestone Tube, which anybody can judge on sight, can be so good and yet sold so low, Firestone Tire Economy must be a fact.

Write for the Firestone sales-helps.

FIRESTONE TIRE AND RUBBER
COMPANY, AKRON, OHIO
Branches and Dealers Everywhere



Truxton-Redden Merger Dropped.

Plans for the merging of the Commercial Car Unit Co. and the Redden Motor Truck Co. have been definitely dropped after having been in suspense for several months. It was finally decided that it was only the patents held by the two companies which would make the merger possible and that even then the combination would hardly be mutually profitable to the two companies. The Commercial Car Unit Co., however, became a licensee under the Cook patents when the negotiations were dropped, under which it will produce Truxton units from its Philadelphia plant.

* * *

Jordan Capital Now Half-Million.

A 50 per cent increase in the production of Jordan motor cars, made possible by the immediate addition of \$200,000 to the capital, and the placing of Jordan stock on a definite paying basis is part of a plan announced at a meeting of the board of directors following the annual stockholders' meeting held in Cleveland. During the past year Jordan did a business of approximately \$3,000,000 on a working capital of \$300,000, producing and selling more than 2,000 Jordan cars. In the last quarter of 1917 Jordan earnings amounted to 16.7 per cent on the capital, which is equivalent to 66.8 per cent for the year. The new plan provides for the sale of \$200,000 of preferred stock now in the treasury, with one-half share of common stock given as a bonus with each share of

preferred. This stock will be fully paid and non-assessable. The preferred stock now held by the original stockholders, together with the new preferred issue, will be placed on a 7 per cent annual dividend basis, to be paid quarterly. The new issue will first be formally offered to the present stockholders who may subscribe pro-rata to their present holdings. In the event that the issue is not all taken by them it will be then available to new subscribers. Control of the Jordan company remains in the hands of Mr. Jordan and his working associates.

* * *

More Work for Bates, of Rayfield.

Enos A. Bates, for many years advertising manager of Findeisen & Kropf, manufacturers of the Rayfield carburetor, will in future direct the advertising and sales departments of the company. It was Mr. Bates who first realized the merits of the Rayfield and induced his employers to enter into its manufacture in a big way. Now this carburetor has a world-wide reputation for excellence, almost wholly through Mr. Bates' efforts.

* * *

Siegfried is King Manager.

J. Ben Siegfried, assistant general manager of the King Motor Car Co., Detroit, has been appointed general manager of the company. He was formerly manager of production. William B. Nesbitt of New York has been elected vice-president, succeeding T. E. A. Barthel, resigned.

Republic Truck Prices Increased.

The Republic Motor Truck Co., Alma, Mich., has made a general increase in the prices of its trucks. The 3/4-ton Republic truck has been increased from \$895 to \$995; 1-ton from \$1,195 to \$1,295; 1 1/2-ton from \$1,550 to \$1,650; 2-ton from \$1,885 to \$1,975; 3 1/2-ton from \$2,750 to \$2,950; and 5-ton from \$4,250 to \$4,500.

* * *

A Correction on Dimensions.

An easily apparent error of dimensions appeared in the March 1 issue of "Motor West" in the body of the article headed "Camelford Extension for Ford Cars," page 18. Here the body of the Camelford Extension was given the microscopic proportions of 9 inches. This of course should have read 9 feet. The Camelford Extension is distributed on the Coast by the Goldman Auto Co., of 1010-20 Folsom St., San Francisco, Cal.

* * *

Welch Western Mgr. Fruehauf Trailer.

H. C. Fruehauf, general manager of the Fruehauf Trailer Co., of Detroit, announces the appointment of J. Welch as Western manager with headquarters in Kansas City. Mr. Welch, who is one of the pioneer and best known automobile salesmen in America, decided to forsake the passenger car business and identify himself with the trailer industry because he believes that trailers will be important factors in solving the transportation problem. Mr. Welch was formerly associated with the Abbott Motor Co., Cleveland, and the Inter-State Automobile Co., Muncie, Ind.

* * *

Vinton Heads National Advertising.

Following the resignation of Lucius S. French, who is now a first lieutenant in the motor equipment section of the Ordnance Department, A. E. Vinton has been made advertising manager of the National Motor Car and Vehicle Corporation, of Indianapolis. For more than eight years, Vinton has been in the sales department, where he was in charge of National's export trade, and back in 1910 and 1911, when National cars were prominent in the road racing world, served in his present capacity as director of advertising. He retains his position as export sales manager.

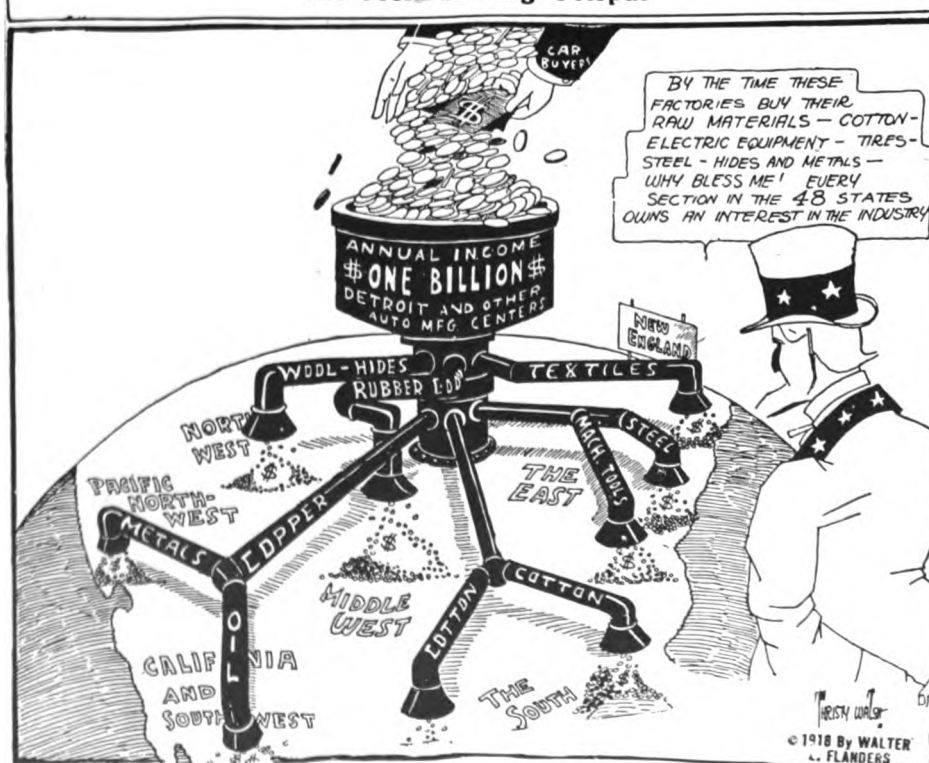
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Maibohm Motors Annual Statement.

The Maibohm Motors Co., of Racine, Wis., manufacturer of the Maibohm car, has issued an annual report which shows substantial progress in the nine months elapsed since the company became a Maine corporation April 1, 1917. The company has \$15,832 cash on hand, outstanding drafts on cars and accounts and notes receivable, \$18,584; inventories, \$67,281, and deferred to operation, \$173,225.39. Total assets and liabilities of the company stand identically at \$434,589. The company's capital stock issued and outstanding totals \$417,710 and the surplus amounts to \$12,294.

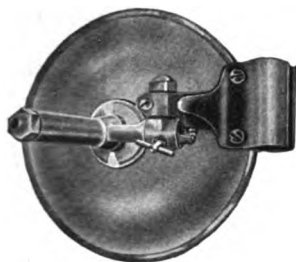
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The Profit-Sharing Octopus



HOW WALTER E. FLANDERS CARRIED INDUSTRY'S MESSAGE TO 100,000,000 PEOPLE.

This is one of the series of Chalmers cartoons devised by Walter E. Chalmers to secure the nation's endorsement of the automobile industry. This series were furnished gratis to many of the leading papers of the country, and attracted wide attention. They were drawn by Christy Walsh, a product of the Pacific Coast, and there is a punch in every one.



Rear View of Williams Spotlight

...THE...

Williams Spotlight

Model A, 6-inch Reflector - \$9.00

Model B, 7-inch Reflector - 10.00

Both models have regulating device integral with bracket which limits the vertical movement of the lamp, thus complying with the lighting laws.

Detachable for Trouble Lamp or for lighting camp at night. The lamp handle contains the "off" and "on" dust-proof and water-proof switch which is conveniently located at the rear of the lamp.

We sell through jobbers only, and are represented on the Pacific Slope by

HUGHSON & MERTON, Inc.

SAN FRANCISCO

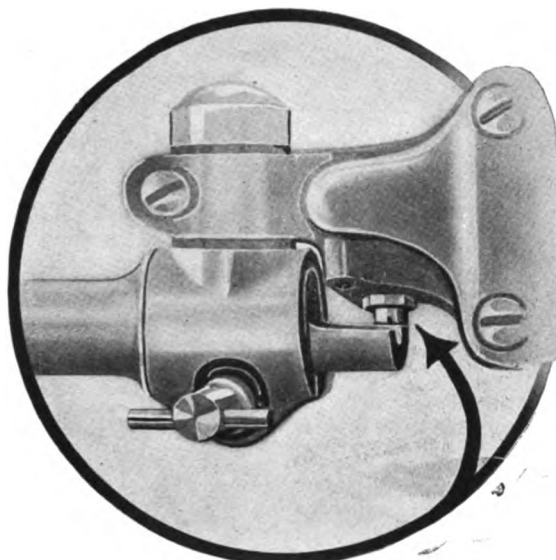
BRANCHES IN LOS ANGELES AND PORTLAND

MANUFACTURED BY

WILLIAMS MFG. CO.

310 North Flower Street

SANTA ANA, CAL.



Detail of Adjustable Control Feature of Williams Spotlight

GARAGE MEN, DO YOU USE

G	E	A	R	S	?
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We carry in stock Gears for 150 makes of Automobiles at prices from 10 to 40% saving. Write for our catalog.

AUTO GEAR & PARTS CO.

1214 South Hope Street

Los Angeles, Cal.



New Things in the Accessories Field

THREE MODELS OF FLECHTER CARBURETORS.

The Flechter carburetor manufactured by L. V. Flechter & Co., in their new mammoth factory, 192-200 Jackson Ave., Long Island City, N. Y., combines simplicity of construction, unusual fuel economy, with reliability of operation. Complicated adjustments that can only be set by an expert have been eliminated.

A fixed nozzle or spray is employed. The orifice of this jet is calculated for the size of the carburetor and type of motor on which it is to be employed, the only adjustment necessary being to the air supply. Flechter carburetors are manufactured in single- and double-jet types, adjustments being provided for low and high speed. Both act directly on the amount of air admitted. These adjustments are placed on top of the carburetor where they are directly accessible, and as they lock at any point they are set, are not affected by vibration or jolting.

The fuel jets employed in the Flechter carburetors are of the atomizing spray type. The suction from the motor draws the gasoline through the opening in the form of a fine mist.

The body of the carburetor is a bronze casting. An annular type of float is employed, made of spun brass and copper plated. The connection between the fuel inlet valve and the annular float consists of a forked lever resting on the float by reason of its weight not being attached. The mixing chamber of the carburetor consists of a Venturi tube specially constructed. The throttle valve is of oval section with beveled edges so that the fuel supply can be regulated at will.

Instead of the usual set screws and stops ordinarily provided for limiting the opening of the throttle lever, two small screws are tapped into the lever arm itself. To provide quick and sensitive response to the throttle when accelerating, the auxiliary air valve is of unusually liberal diameter.

Control of the amount of air admitted by the auxiliary air valve is effected by increasing or decreasing the compression of the low-speed and the high-speed springs, which constitute the only adjust-

ment on the Flechter carburetor. Both these are placed concentrically on top of the auxiliary air valve.

In addition to the top and side outlet models for all makes of cars and trucks, the Flechter Co. manufactures a special model for Fords, known as the Trident. This model is made with a single jet.

THE S & M SPOT-LITE DE LUXE.

President James R. Shirreffs, of the S & M Lamp Co., Los Angeles, has called the attention of "Motor West" to what he calls "the pride of the S & M line"—the No. 90, Spot-Lite De Luxe. This leader of a celebrated line is noted for the intense brilliancy of its concentrated ray, which cuts far into the darkness—3600 feet—yet the depth of its parabolic re-



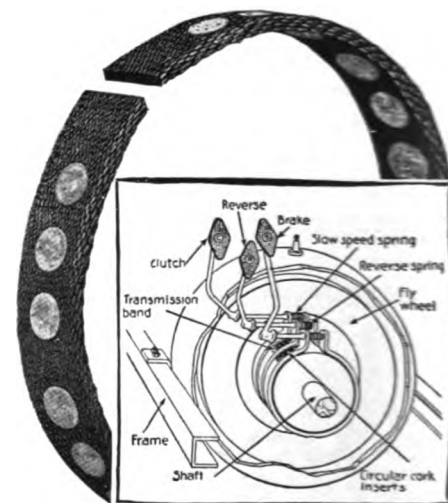
S & M SPOT-LITE DE LUXE.

flector insures a generous field of illumination. It is richly finished in nickel and black enamel, and harmonizes with the most expensive and finely-finished car—hence its name, De Luxe.

The press-button switch is placed just where the thumb naturally falls, and a push of the thumb throws the light on or off. The regulating bracket, which features all S & M lamps, was specially designed to make it conform with the law regarding spotlights, and it is claimed that it is impossible to break the law or dazzle another driver. The Periscope, a rear-vision mirror, flawlessly ground and polished, is in keeping with the rest of the lamp, which gives a touch of distinction to any car to which it is attached. The diameter of the reflector is 7½ inches, and the lamp is listed at \$12.50, with an additional charge of \$1.50 when the Periscope is attached.

CORK INSERT TRANSMISSION LININGS STOP FORD CHATTER.

The Ford low-speed clutch, reverse and service brake action is dependent upon contracting bands, which must be lined with some sort of fabric to make them efficient. After a short period of usage, ordinary linings become hard and glassy-surfaced, due to the great amount of friction and pressure imposed upon them, plus the continuous bath of oil present in the planetary transmission. The lining loses its resiliency and frictional surface and acts as would a metallic lining upon the transmission drum proper. To secure the little braking or transmission virtue the ordinary lining retains after brief service, requires strenuous pressure on



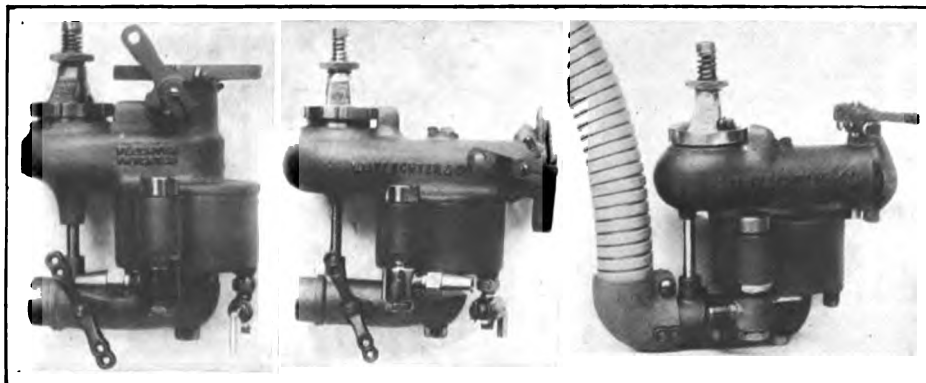
CORK INSERT LININGS, AND HOW THEY OPERATE.

the pedal. The engagement is intermittent and jerky, caused by one hard, nearly-metallic surface engaging with another metallic surface.

A great deal of the noise and vibration in the Ford car is caused by slipping and grabbing in the transmission, due to inefficient lining. The "chattering," which is always in evidence when the brake is used, is directly traceable to the poor braking qualities of the ordinary lining.

Cork Insert Linings get away from this by the use of cork. Into highest grade transmission fabric, itself of very high frictional value, discs of cork are inserted at regular intervals. With cork making the initial engagements all the jumping and jerking is eliminated and much additional life is given to the lining.

The Advance Automobile Accessories Corporation, 56 E. Randolph St., Chicago, makers of Cork Insert Transmission Linings, report a tremendous increase in 1918 sales over those of 1917. Practically all the recognized jobbers carry both Ford Transmission Linings and Ford Fan Belts, and are rapidly taking up the sale of Cork Insert Brake Lining for big cars. Leo Stein, 214 Kohl Bldg., San Francisco, is manager of Pacific Coast sales.



THREE TYPES FLECHTER CARBURETORS—TOP OUTLET, SIDE OUTLET, FORD TRIDENT.

EVERYTHING

IN

**AUTOMOBILE TRIMMINGS
AUTOMOBILE AND TRUCK BODY HARDWARE
WHEELS AND WHEEL MATERIALS
SPRINGS AND SPRING STEELS
HEAVY HARDWARE
STEEL**

SCOVEL IRON STORE CO.

**SAN FRANCISCO
754-6-8 Howard Street**

**LOS ANGELES
1401-3-5-7 Main Street**

HERZ PLUGS

"Bougie Mercedes"

**LAW OFFICES
PREBLE, MCAULAY & MEIGS
FIRST NAT'L BANK BLDG.,
NORTH YAKIMA, WASH.**

**E. R. Preble
Geo. F. McAulay
Leonard O. Meigs**

Herz & Co.,
245 W. 55th St., New York.

Gentlemen: I own a 4-cyl. 7-passenger, 1914 model, 45 h.p. White automobile which has been in continuous operation since it was turned out of the factory and which still has in it a set of **Herz Plugs** that came in the machine. I expect to run the car another ten years and realizing that an accident may happen to the plugs any time, I want to have a couple of your plugs on hand for use in emergencies. I tried to buy them at a local dealer's and was told that they were no longer obtainable in this country, and it was only while reading the "Literary Digest" today that I ran across your advertisement.

I would like you to send me a couple of the plugs to fit the car above mentioned, sending me a bill for the same. I will remit promptly upon receipt of them.

Yours very truly,

(Signed) LEONARD O. MEIGS.



Clydesdale
MOTOR  TRUCKS

Sturdy, strong and powerful enough to meet the stringent demands of war. Economical, dependable and light enough to more than profitably satisfy America's masters of commerce. Every inch of the Clydesdale bespeaks dependable performance under all conditions. Capacity up to five tons. Ask our dealer to demonstrate and explain Clydesdale's exclusive features.

THE CLYDE CARS CO., Clyde, Ohio

HERZ & CO., 245 W. 55th St., New York

MAKES MOTOR TOURING AND CAMPING A PLEASURE.

One of the most recent inventions designed to add pleasure to motor touring and camping is the Musso Auto Home Camp Bed, manufactured by F. G. Musso.



MUSO CAMP BED ON THE ROAD AND READY FOR THE NIGHT.

70 East San Carlos street, San Jose, Cal. This outfit consists of a convertible combination, providing a tent, double bed (with a feather mattress quilted in sections), and a private wardrobe dressing room which has hooks upon which to hang clothing and pockets for the accommodation of sundries. The side curtains may be lifted back, thus insuring adequate ventilation from all sides; mosquito curtains are also provided.

The entire outfit rolls quickly and easily into a small, compact roll, which may be carried on the running board or in the tonneau of any automobile. Being entirely independent of the car, the motorist may park his car in one place and make his camp wherever he desires. The outfit also makes an ideal sleeping porch and can be set up in the back yard or the garden of city homes and used for outdoor sleeping accommodations in warm weather.

THIEF-PROOF LOCK ON VINCENT STEERING WHEELS.

The Vincent Clear-Room Steering Wheel Co., Detroit, has incorporated in its later models an absolutely thief-proof lock which guarantees the owner against theft of his car. The lock is constructed of nickel steel, as is the hub of the wheel, and prevents the wheel being removed from the steering column, without the use of the proper key, so that another wheel cannot be substituted in its place, as is sometimes done by car thieves.

The Vincent company claims that its clear-room steering wheels afford the driver more clearance than any other adjustable steering wheel made, and that it absolutely will not stick, wear or rattle. The wheel presents exceptionally trim lines and adds to the appearance of any car upon which it is applied. A large production of these wheels is planned for the coming season, as the demand for this is increasing rapidly.

Adjustable wheels as a rule tilt either up or down but not in both directions, whereas the Vincent company's Model L wheel tilts either up or down with equal facility.

The standard lock shows perfect construction, being made of non-drillable steel, is non-breakable and prevents removal of the wheel from the steering shaft—it is a real car insurance.

When the lock is released the wheel turns freely on the steering shaft and the car cannot be steered or controlled by any one who does not possess the proper key to operate the lock.

The hub bushings are interchangeable to fit all makes of cars and this feature enables the jobber and dealer to supply any requirement with a modest stock of wheels on hand.

The bushing is selected and supplied with the wheel for the make of car for which it is required; a decided advantage over any other make of wheel on the market.

Vincent wheels are supplied either for cars where the spark and throttle control levers are over the wheel or where they are under the wheel, and a special Ford wheel is included in the line. They provide more clearance than any other wheel.

Jobbers and dealers will find the Vincent line of steering wheels a quick-selling and very profitable accessory and the makers back up the trade with national advertising and helps. A campaign for Pacific Coast jobbers and dealers is now being planned for in "Motor West."

TO REMOVE CARBON FROM CYLINDERS.

A valuable repair adjunct, for mechanically removing carbon from cylinders, is the Flexible Carbon Scraper. This consists of a set of three tools made of spring steel wire, highly flexible, by means of which it is easy to reach all parts of the combustion chamber through the valve-cap openings. In overhead valve motors it may be reached through the spark plug



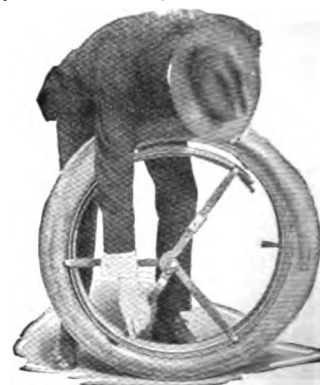
SET OF FLEXIBLE CARBON SCRAPERS.

openings. This obviates necessity for taking the engine down for thorough carbon removal and accomplishes a great saving in time. The especial flexibility of the tool is due to its being formed of six spring steel wires that easily conform to the shape of the surface to be scraped, and clean a path the entire width of the tool. The patentees and manufacturers are the Flexible Carbon Scraper Co., 1421 W. Washington St., Los Angeles, Cal.

LAWCO RIM TOOL REMOVES RIM IN 15 SECONDS.

The Lawco Rim Tool makes it possible for a mechanic to remove a rim in 15 seconds, while a woman or child can easily remove it in a minute's time. The merits of the Lawco Rim Tool become striking when it is remembered that hitherto this task has required from fifteen minutes to two hours' time, all depending on the skill and ingenuity of the man doing the work. This rim wrench consists simply of a set of claws which can be hooked over a rim and contracted by a simple motion of the lever. The lever locks the tool automatically and holds the contraction, leaving both of the workers hands free to remove the loose tire. After the tire has been repaired it can be put back on again while the rim is still in the grip of the tool. To latch the rim at the split, the tool is then released and placed inside the rim and a reverse movement of the lever expands the rim enough to cause the ends to meet and permit latching.

The three movements of breaking, contracting and latching cover all necessary operations. The tool is claimed to work equally well on every one of the fifty or

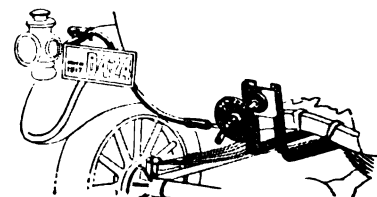
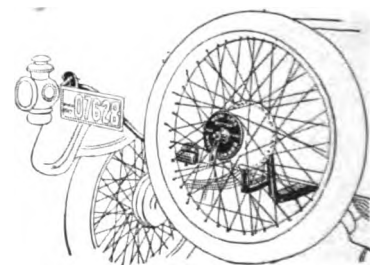


RIM REMOVAL IS EASY WITH LAWCO TOOL.

more types of rim now in existence. The Lawco Rim Tool is sold for \$3.50 and is manufactured by the F. H. Lawson Co., Cincinnati, O.

NEW ERA WHEEL CARRIER FOR DEMOUNTABLE WHEELS.

New Era "Better" Wheel Carriers are a response to a large and growing demand manifested by Ford owners for wire and demountable wire wheel equipment upon their cars. The construction of this carrier is of steel throughout, making it strong enough to carry several times the required weight with absolutely no vibration. It attaches to the rear spring clips on the car through the tightening of only four nuts. Accompanying the carrier is a lamp extension designed to bring the lamp out over the rear fender. A hole in the hub bolt is provided for locking the wheel to the carrier. The carriers are ordered by number and are sold in sizes making them adaptable to Pasco, Hayes,



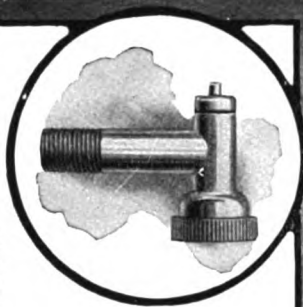
NEW ERA "BETTER" WHEEL CARRIER.

Houk and Frayer-Miller wire wheels and Minute and Simplicity demountable wooden wheels. The uniform price is \$5, to which ten per cent is added west of Denver. Manufactured by the New Era Spring & Specialty Co., Grand Rapids, Mich.

MOTOR WEST reaches a larger percentage of dealers than any other automobile publication circulated on the PACIFIC COAST.

No Trouble to Pump Tires

Perhaps you have been neglecting the all-important matter of tire-pumping and air-testing because of the exertion it involved; the time it took, and the annoyance it caused.



You no longer have that excuse, for with a

Schrader Universal Pump Connection

tire-pumping and air-testing are now simple and easy operations.

Ask your dealer to show you how it works.

Price in U. S. A. Thirty-five Cents

At your dealer or

A. Schrader's Son, Inc.
783-803 Atlantic Ave., Bklyn.
London Chicago Toronto

W. S. S.

We	Suggest	Stamps
War	Savings	Stamps
Without	Shells	Soldiers
Would	Soon	Succumb
War	Savings	Stamps
Will	Supply	Soldiers
With	Shells	

Buy all you can and help to win the war



CONSERVATION

Get the full output of your engine, develop its maximum power and don't contribute to the waste of gasoline.

Avoid inefficient, weak ignition systems which cause waste; Bosch Magneto Ignition is effective, reliable ignition.

Correspondence Invited.

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Coast Branch: 1324 Van Ness Ave., San Francisco

Coast Distributors: E. A. Featherstone, Los Angeles
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PISTON SERVICE



Light Weight, Any Make

Cast Iron Pistons

Are the BEST by TEST

FINISHED

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LARGEST PRODUCERS IN THE WEST

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HOTEL ST. FRANCIS San Francisco

Center of the City's Life and Color

EUROPEAN PLAN FROM \$2.00

Management - James Woods



The Most Remarkable Top Material Yet Produced

DRIDEK with its leather finish will not chafe, crack or blister—and holds its color right through to the cloth lining.

A **DRIDEK** Top is a credit to any car

Special **DRIDEK** Colors

Battleship Gray
Maroon, Olive Green
Tans, Brown
Olive-Drab, Khaki

Send for samples and prices—*today*

L. J. Mutty Co.

Boston, Mass.



Los Angeles, Cal.—The Union Seat Co. of America, formed to manufacture seats for automobiles and other vehicles, has been authorized by the state corporation commissioner to issue 15,000 shares of common stock to C. M. Webb in exchange for a license and exclusive right on certain patents and inventions on vehicle seats; also to sell to the public 1500 preferred shares.

* * *

Long Beach, Cal.—The Broadway Garage has taken the Franklin car agency.—A. E. Evans & Co., Packard, Paige and Reo dealers, have extended their territory to include Orange, Garden Grove, Balboa, and Newport Beach.—Crenshaw & Elder have taken the Nash Six agency.

* * *

Pasadena, Cal.—Goddell & Mead have taken over the Chevrolet agency.

* * *

Madera, Cal.—The D St. Garage, formerly the Mariposa Big Tree Garage has been bought by S. Brunner.

* * *

Santa Rosa, Cal.—M. A. LeBrun, Grant dealer, has added the Premier car agency.

* * *

San Bernardino, Cal.—H. E. Bowen and E. E. Ettleson have taken over the Studebaker agency here from R. B. Deyoe.

* * *

Colusa, Cal.—Ralph S. Waidler has taken the Studebaker agency.

* * *

Chico, Cal.—W. S. Peace has been appointed manager of the local branch of the DuBroy Motor Co., San Francisco, selling Mitchell and Saxon cars.

* * *

Bakersfield, Cal.—The Signal and Stewart truck agencies have been added by Harris Bros., Kern county dealers for Jordan and Grant cars.

* * *

Santa Rosa, Cal.—P. J. Faletti has taken the Oldsmobile agency here.

* * *

Fresno, Cal.—The Howden-Butler Co. has been incorporated for \$200,000 in capital stock, of which 500 out of 2,000 shares have been taken by the incorporators, Charles G. Bonner, Ralph H. Butler, J. G. Howden, Marie W. Bonner and Chris Skow.

* * *

Porterville, Cal.—John L. Hazen has taken the Buick agency.

* * *

Spokane, Wash.—W. W. Trumbull, of the Spokane Auto Co., has let a contract for the erection of a new building, to be located at W820 Second Ave. and to cost \$8,000.—The Chevrolet Motor Co. branch has opened an office and parts stock room at W920-22 Second Ave. for wholesale business.

* * *

Seattle, Wash.—The Used Car Emporium has been opened at Twelfth Ave. and E. Pine St., by E. V. Reeves and W. F. Costello.—The Bardshar Motor Co. has occupied its new two-story building, with 18,000 square feet of floor space, on Twelfth Ave. near Pine St.

* * *

Portland, Ore.—Ballou & Wright have been appointed distributors of Gray & Davis starting systems for Ford cars.—A. C. Stevens, Winton and Haynes dealer, and Lee L. Gilbert, Elgin and Harroun dealer, have moved into new quarters at 531 Washington St., which they will occupy jointly.

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We Repair all makes of Batteries, Generators,
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PROMPT ATTENTION GIVEN TO COUNTRY TRADE

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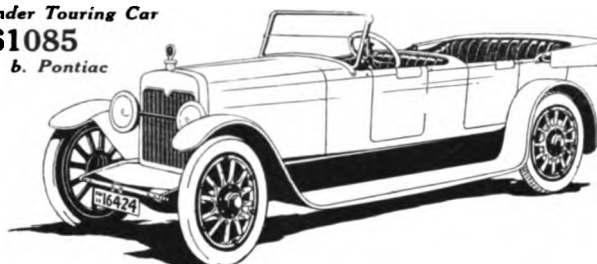
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Write for dealer proposition

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\$1085

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Main 1076 **CAMBRIA SPRING CO.** F 5233

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Wheels and Rims
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Automobile and Stationary Engines

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Mohawk "Quality" Tires are worthy of the exclusive efforts of the best dealers in each town. The best tire and the best dealer to handle it is our aim.

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All Kinds, Any Size
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INTER-STATE

The best light car on the market today.
Economical in every way, and tremendous Power. Once an Inter-State owner always an Inter-State owner.

WRIGHT MOTOR CAR CO.

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Personal and national credit are founded more upon confidence than collateral.

Confidence justified by years of experience with Kelly-Springfield tires has led to their enthusiastic recommendation by one motorist to another; and that, more than paid advertising, has put Kelly tires on so many of the best types of motor cars.

Their quality keeps them there.



Kelly-Springfield Tire Co.

Executive Offices

Seventh Ave. at 57th St., New York.

General Sales Department

1900 Euclid Ave., Cleveland, O.

San Francisco, Cal.—The United Motors Service, Inc., giving service for Remy and Delco electric systems, Klaxon horns and Hyatt and New Departure ball bearings, will occupy a new building now being built at Van Ness Ave. and Clay St.—The Standard Auto Supply Co. has located at Polk and Hemlock Sts.—The Chester N. Weaver Co., Studebaker dealer, has been authorized by the state commissioner of corporations to sell 100,000 shares of stock at \$1 net to the company.—The Bushnell Magneto Co. has been formed to manufacture and sell a new type of magneto invented by John E. Bushnell and has been authorized to issue 500 shares of stock to Bushnell and W. S. Killingsworth, Jr., and to sell 500 shares at par, \$100 per share.—The Power Rubber Co. has been authorized to issue 1500 shares to James E. Power, Thomas J. Turner and Frank Marisch in exchange for their co-partnership business.

* * *

Salt Lake City, Utah.—The Strevell-Paterson Hardware Co. has secured the sole agency for Dreadnaught tires in the inter-mountain region.—C. L. O'Brien has bought an interest in the Sun Motor Sales Co., Maxwell distributors here.

* * *

Toelee, Utah.—The Toelee Hardware & Implement Co. has taken the Toelee County agency for Chevrolet cars and trucks.

* * *

Glendale, Ariz.—The Ford Garage is having a new building erected for it to cost \$10,000.

* * *

Albuquerque, N. M.—The Chalmers agency has been taken by Arthur T. Elkins.

* * *

Phoenix, Ariz.—Republic trucks for the Arizona territory are to be distributed by a sales branch opened here recently by the Southern Motor Co., El Paso, Tex.

* * *

Carson City, Nev.—The Red Arrow Garage has been incorporated with \$25,000 capital stock by George A. Cole, T. L. Hawkins and Arthur Raycraft as incorporators.

* * *

Oakland, Cal.—The L. H. Rose-Chalmers Co., of San Francisco, Chalmers dealer, has opened branch quarters at 2841 Broadway in charge of J. L. Brambila.

* * *

Stockton, Cal.—The Guarantee Ignition & Supply Co. has taken the McKee headlight lens agency.

* * *

Lodi, Cal.—J. B. Cathcart will be Saxon car dealer here.

* * *

Tacoma, Wash.—The Automobile Supply Co. has taken the agency for Bailey Ball Thrust Bearings.

* * *

Silver City, N. M.—The Silver City Garage, Inc., has been formed by R. D. Haven, W. K. Burnside and L. E. Foster, with \$50,000 capital stock.

* * *

Albuquerque, N. M.—The Cooper Motor Co., Reo dealer, has added the Maxwell line.

* * *

Red Bluff, Cal.—The Willys-Overland agency for Tehama county has been bought by C. W. and J. Billings from P. A. Hunter.

* * *

Taft, Cal.—E. D. Eleam has taken the agency for the Saxon car.

* * *

Albuquerque, N. M.—The Albuquerque Motor Co. has been taken over by C. M. Barber.

* * *

San Diego, Cal.—The Hibner-Alexander Co., Cadillac dealer, has moved into its new building at Broadway and Fifteenth St.—The Auto Tire Co. has been purchased by J. Hubert Guy and L. A. Unger, who will abandon wholesaling and concentrate on retail sales.—The Sherlock-Keene Co., Southern California and Arizona dealer for Master trucks, has opened temporary quarters at 945 Seventh St.

Elgin Six

"The Car of the Hour"

Big, Beautiful, Impressive, Powerful, Dependable,
Economical


"Built Like a Watch"

4-Passenger Roadster **\$1095**
5-Passenger Touring Car.....

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Write for descriptive catalogues

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PISTON
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ELIMINATE
ALL PISTON
RING TROUBLES

THE RING COMPANY
SPECIALISTS IN PISTON RINGS
MUSKEGON • MICHIGAN

RADIATORS and FENDERS REPAIRED

ALSO BODIES, TANKS AND HOODS

Best Copper Radiator Core Installed Here

Motor Car **EQUIPMENT REPAIRS** Company

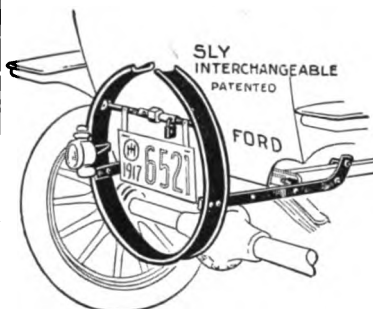
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F 3700

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The strap kinds are obsolete and unsightly. The Sly interchangeable—Ford or Chevrolet quickly—neatly does the trick—take any casing or demountable—cost no more. Beware of imitations. If your Jobber doesn't list, write us for complete catalogue—of real Carriers and "Better Springs."

NEW ERA SPRING & SPECIALTY CO.

1190 Hamilton Ave.,
Grand Rapids, Mich.

HARROUN

A car of popular price, designed by Ray Harroun, in which a new type of four-cylinder motor develops revolutionary power and efficiency.

Harroun Motors Corporation

General Offices and Plants, Wayne, Mich.

FORD CAR OWNERS USE KEROSENE

(Coal Oil)

One Mile on Kerosene Costs Less than $\frac{1}{2}$ cent

One Mile on Gasoline Costs From $1\frac{1}{4}$ to $1\frac{1}{2}$ cents

BUY A DETROIT KEROSENE EQUIPMENT

Save 60% Price of Equipment \$25 f. o. b. Detroit

30 days Trial or MONEY BACK — ACT PROMPTLY!

These are days of strict economy

DETROIT KEROSENE CARBURETOR CO.

KRESGE BLDG.

DETROIT

Department 16



88 Manufacturers
Give their cars the "Vital Spark" through

AC *The Standard Spark Plug of America*

Dependable at all speeds. The Trade Mark—"AC" is burnt into the porcelain

Champion Ignition Company
Sole Manufacturers Flint, Michigan



ARISTO
MOTOR OIL

BEST ALLWAYS

UNION OIL CO. OF CALIFORNIA

"The Best Oil For Our Cars"

Chevrolet

—J. W. Leavitt & Co., San Francisco—"From our exhaustive tests of Zerolene, we think it is the best oil for use in our cars."

Reo

—American Automobile Co., Tacoma—"tried Zerolene in Reo cars; results so good that we have been entirely converted."

Dort

—Leach-Frawley Motor Co., San Francisco—"excellent mileage with minimum carbonization."

Packard

—Cuyler Lee, Oakland—"Zerolene has given us perfect satisfaction."

ZEROLENE

The Standard Oil for Motor Cars

Endorsed by Leading Car Distributors.

—because the records of their service departments show that Zerolene, correctly refined from California asphalt-base crude, gives perfect lubrication—less wear, more power, least carbon deposit.

Dealers everywhere and at our
service stations.

Standard Oil Company
(California)

Salt Lake City, Utah—The U-Bilt Tire Co. has moved into new and larger quarters at 447 S. Main St.

* * *

Ogden, Utah—The Western Motor & Tractor Co., S. J. Harris, manager, will handle Studebaker cars throughout the northern Utah territory.

* * *

Garden Grove, Cal.—E. A. Pearson has taken the Dort car agency.

* * *

Salinas, Cal.—The Monterey County territory for Dort and Liberty cars has been taken by W. J. Fowne.

* * *

McFarland, Cal.—The King Garage has been bought by J. F. Broce and L. J. Kuentzer.

* * *

Pomona, Cal.—W. B. Gates has added the Franklin line to the Studebaker agency.

* * *

Fortuna, Cal.—R. C. Look has sold his interest in the Eel River Garage to B. Q. Keesey.

* * *

Chico, Cal.—Argyle White has become dealer for Bethlehem trucks.

* * *

Blythe, Cal.—Harry West, of the Lincoln Shop, has taken the Willard battery service station here.

* * *

Napa, Cal.—The Service Garage has been opened here by E. R. Schmutz.

* * *

Salinas, Cal.—Bowen & Manbert have taken the Kissel-Kar agency.

* * *

Auburn, Wash.—The Ward Garage Co. has been incorporated by E. Clayton Ward, Charles L. Schaefer and Austin W. Lanquist, with a capitalization of \$2,500.—The Fairchild Motor Co. has been opened by W. C. Fairchild to handle Ford cars and trucks.

* * *

Laton, Cal.—Thomas Corum has purchased an interest in the S. P. Tilghman blacksmith shop and will operate a garage and general machine shop.

* * *

Vacaville, Cal.—E. H. McMillan, Sr., has retired from management of the McMillan Garage, pioneer Ford agency, which has gone over to E. H. McMillan, Jr., and L. M. Kippley.

* * *

Anaheim, Cal.—The Cadillac Garage Co., of Santa Ana, Orange county agents for the Cadillac, have opened a branch sales agency here.

* * *

Portland, Ore.—The Western Motor Car Co., successor to the H. L. Keats Co., has located its used car department in the former Keats Garage.

* * *

San Jose, Cal.—M. B. Charles will act as representative for the Domestic Engineering Co., manufacturers of Delco-Light systems, in Santa Clara and Santa Cruz counties.

* * *

North Yakima, Wash.—The H. & B. Motor Car Co. has become agency for Stephens cars.

* * *

Corfu, Wash.—W. M. McCormick has become agent for the Stephens car.

* * *

Dinuba, Cal.—B. H. Hiestand and Elbert Cochran have taken the agency for the Grant car.

* * *

Oxnard, Cal.—C. R. Arnold has taken the Kissel-Kar agency for Ventura county.

* * *

Tulare, Cal.—William G. Hesse has become Kissel-Kar agent here.

PHONE: Main 4062

PHONE: A-4062

U.S. SPRINGS
AS GOOD AS THEIR NAME

AUTO AND TRUCK SPRINGS

WHEELS, BUMPERS FORGINGS

Wholesale

Retail

UNITED STATES SPRING CO., Inc.
Successors to A. & F. SPRING CO.,
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ADAMSON

VULCANIZERS

are an economical way of practicing an economy—they use convenient gasoline; no special fuel or expensive electricity is required. They are safe—the heat is automatically regulated.

DEALERS: Order from your jobber today. If he can't supply you, send us his name.

ADAMSON MANUFACTURING CO., East Palestine, Ohio


THE FULTON TRUCK

1½ Ton Capacity


Has created the world's standard in motor truck value

If you are interested in a real money making agency where selling resistance has been reduced to a minimum, communicate with us NOW.

Fulton Motor Truck Co., Farmingdale, L. I., N. Y.



Defender Auto-Lock Supremacy



1. Locks coil box and protects units by strong steel band. (Pat. pending)
2. Grounds and short-circuits the entire electrical system. (Pat. pending)
3. Solid aluminum case locks over Ford switch without using screws. (Patent pending)
4. Recognized as standard ignition lock by insurance underwriters laboratories, saves 15% on insurance.
5. Guaranteed for life of the car.

THEY SELL AND REPEAT!

DEFENDER AUTO-LOCK CO., Marquette Bldg. DETROIT, MICH.

Save the Nation's Gasoline with the

SUNDERMAN \$6

Vacuum Carburetor

This price maintains on Ford and Metz models
Other cars \$8 and \$10, depending on fittings necessary

This perfect carburetor will save you, no matter what your car, from 30 to 50% in your gasoline consumption. At the same time it will give your motor power, speed and flexibility beyond your fondest hopes.

It's your duty to your country to save gasoline when you can. It's a dealer's duty to promote the sale of an instrument that will cheapen the cost of running a car.

Send in your orders now—Fall is a big carburetor season

SUNDERMAN CORPORATION
17 Chambers Street (Dept. C) NEWBURGH, N. Y.
Western Office: 408 Kresge Bldg., Detroit.

"The Light That Shows the Road"



IMPROVED SWITCH
Cord Attachment
Patented
Regulating
Bracket
Waterproof
Dustproof

These are the distinctive features of the NEW MODEL

S & M SPOT-LITE

Ask your dealer to show you the new model

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Motor Oils

THE HIGHEST POINT OF EFFICIENCY

Gasoline "with the Punch"

PUENTE OIL CO.

Oldest Refiners and Producers on the Coast

PRESSED STEEL PARTS FOR AUTOMOBILES AND TRUCKS

ESTIMATES CHEERFULLY FURNISHED

The Bossert Corporation

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MOTOR WEST

Reaches a larger percentage of dealers than any automobile publication circulated on the

PACIFIC COAST.



BEST IN THE LONG RUN

**Tested Warriors
of the Road**



THE soldier must be tried in the fire of battle to be a tested soldier; the tire must be tried in the fire of the road test to be a tested tire.



**GOODRICH
TESTED TIRES**



That is the Goodrich idea of a tire. Therefore, Goodrich Test Car Fleets, six of them, for a year hammered Goodrich Tires from state to state, putting them to the road test. The tires emerged tested warriors of the road, from a grand mileage of 4,178,744 tire miles.

They triumphed, **SILVERTOWN CORDS** and **BLACK SAFETY TREADS**, with an endurance that doubled Goodrich's pride in the structure of the spiral wrapped, cable-cord tire body, and the toughness of the cross-barred, close-clutch non-skid black safety tread.



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Get this assured service of proven service by getting the conquerors of America's roads. Get "America's Tested Tires," and you get long mileage and dependability wherever you take your car.

THE B. F. GOODRICH RUBBER CO.

Where You See This Sign
Goodrich Tires are Stocked



Buy from Goodrich Dealers
Located Everywhere

THE CITY OF GOODRICH - AKRON, OHIO.



Part of the great Tide Water Oil Company Refineries, where Veedol is made



GET YOUR SHARE OF \$2,000,000 VEEDOL PROFITS

LAST year the sales of Veedol doubled. This year they are already running ahead of the 1917 record. Retailers report 60%—90%—120%—and even larger gains in volume of sales.

A Veedol sign over your door will bring you more sales and bigger profits.

Veedol advertisements reach more than 28,000,000 people. Think what this means to the Veedol dealer.

No Work at all to Sell Veedol

Dealers tell us that their sales are increasing rapidly, with no effort on their part. The sales work has already been done by our national advertising. Good profits, increased volume, and the good-will and prestige that comes from handling a highly satisfactory article are also among the benefits enjoyed by the dealer who sells Veedol.

Then, too, you are protected by doing business with a big, broad-gauge concern, manufacturing its entire product in its own plant.

Fast Selling Greases

There is a special Veedol grease for every purpose, each of the same high quality as Veedol. That is why you can increase your sales if you stock Veedol greases.



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LATHAN AUTO SUPPLY CO. San Francisco
McCOY MOTOR SUPPLY CO. San Francisco
JAS. S. REMICK CO. Stockton

COLORADO.

THE AUTO EQUIPMENT CO. Denver

HAWAII.

SMOOT & STEINHAUSER Honolulu

IDAHO.

SALT LAKE HARDWARE CO. Nampa
SALT LAKE HARDWARE CO. Pocatello

MONTANA.

NORTHWESTERN AUTO SUPPLY CO. Billings
NORTHWESTERN AUTO SUPPLY CO. Great Falls
A. M. HOLTER HARDWARE CO. Helena

NEVADA.

NEVADA AUTO SUPPLY CO. Reno

OREGON.

BALLOU & WRIGHT Portland

UTAH

SALT LAKE HARDWARE CO. Milford

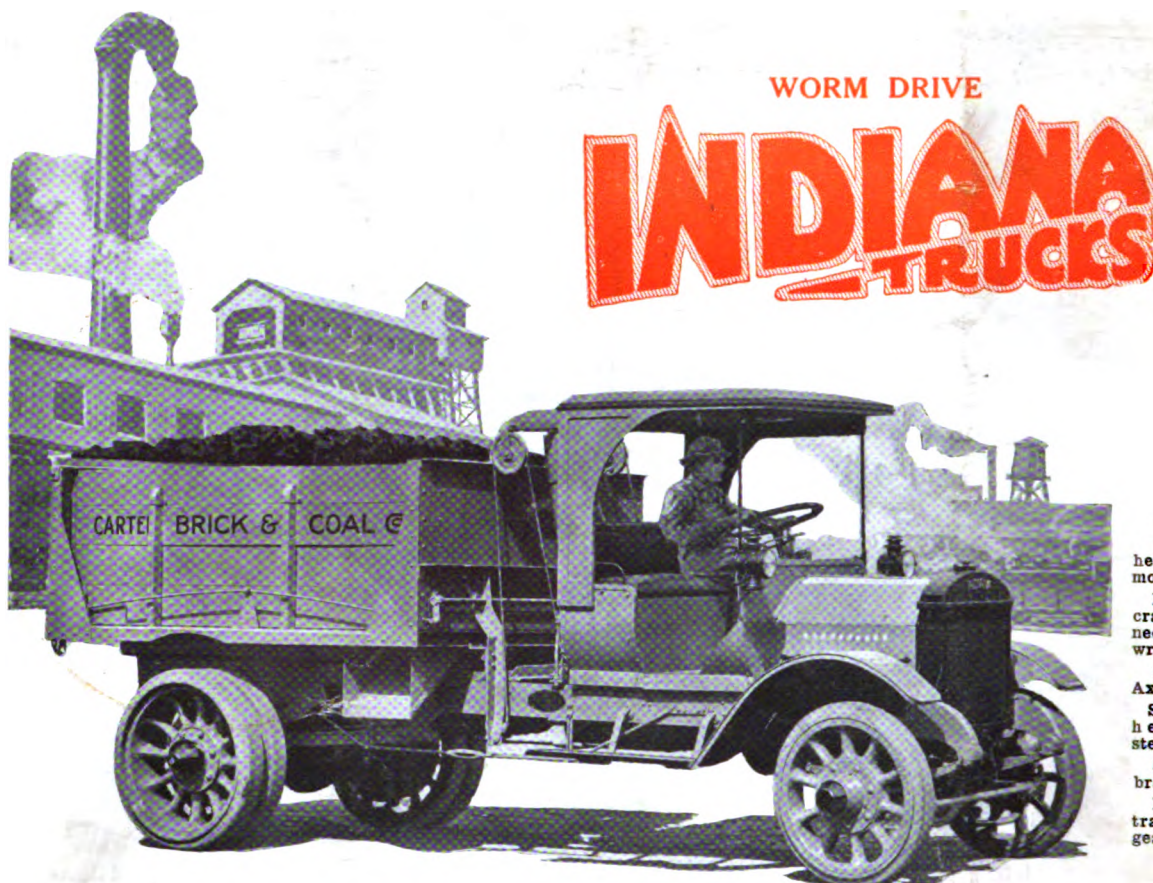
WASHINGTON.

BALLOU & WRIGHT Seattle
AUTOMOBILE SUPPLY CO. Tacoma

CANADA.

NELSON MOTOR & SUPPLY CO. Nelson, B. C.
MILLENS, B. C., Ltd., Vancouver, B. C.

Mention "Motor West." Please. When Writing to the Advertiser



FEATURES
 Special built heavy-duty type motor.
 Extra - strong crankshaft, connecting rods and wrist pins.
 80,000 - Mile Axle Service.
 Special analysis heavy channel steel frame.
 50% more brake surface.
 Nickel - steel transmission gears.

Make This Your Biggest Year Alert Dealers Know 1918 Spells Profits

The demand for trucks has never been so great as today.

And the Indiana Truck is selling faster and giving a higher degree of service than any other similarly priced trucks that we know.

Indiana Truck's earning power in users' hands shows \$3,000 a year to \$10,000 a year net from individual trucks and we have fleet reports that show up to \$50,000 net earnings.

Back of these facts, Indiana dependability is vouched for by the 112% reserve strength built into every Indiana truck. The worm-drive rear axle is tested for 100,000 mile service. Our clutch is acknowledged to be the best truck clutch in the world; our motor is a special high-duty motor, designed and built for truck use only. Springs, frame and radiator have equally dependable service built into them.

"IF INDIANA TRUCKS COULD BE BUILT BETTER FOR MORE MONEY INDIANA WOULD BUILD THEM."

Get Your Territory For Indiana Trucks

There is BIG demand existing today in your territory for Indiana Trucks. It is created by the work Indiana Trucks are doing in the West, and by our heavy national advertising campaign.

We are closing desirable Western territory daily. Yours may be open, and we suggest getting our proposition at once, by wire.

INDIANA TRUCK CORPORATION

DEPT. 81. MARION, INDIANA.

WESTERN DISTRIBUTORS:

Northwest Auto Co., Portland, Ore.
 United Motors Co., Seattle, Wash.
 Motor Distributors Co., San Francisco, Cal.
 Merrick Auto Co., Denver, Colo.

WESTERN DISTRIBUTORS:

D. W. Carlton, Los Angeles, Cal.
 Brewer Motor Car Co., Spokane, Wash.
 Sonora Auto Co., Nogales, Ariz.
 Coffin & Beglan, Boise, Idaho.



Ed. for No. 12.

Feb 27 1941



